# Service Manual

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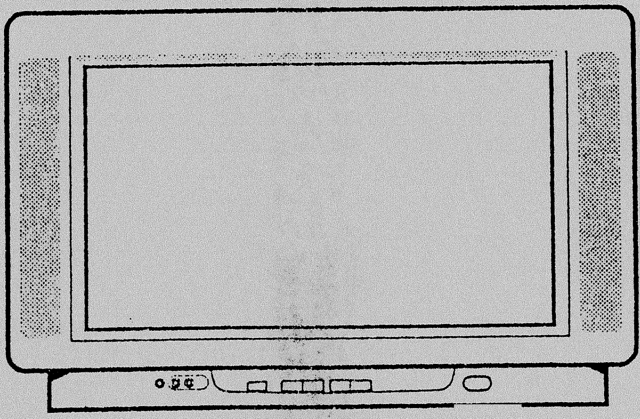
## ORION

# TV-2016W

COLOR TELEVISION RECEIVER



Chassis Code:

**A**

Bestell-Nr.:

**7571**

Ånderungen vorbehalten!

Printed in Germany

## SPECIFICATIONS

| | | | |
|---|---|---|---|
| **POWER SUPPLY:** | AC 230V, 50HZ | **INTERMEDIATE FREQUENCY:** | (PAL) |
| **POWER CONSUMPTION:** | 115 W at AC 220V | Picture IF Carrier Frequency | 38.9 MHz |
| **SYSTEM:** | PAL B.G | Color Sub Carrier Frequency | 34.47 MHz |
| **FREQUENCY RANGE:** | | Sound IF Carrier Frequency | 33.4 MHz |
| VHF (L) | 2 - 4, X, Y, Z, S1 - S7 ch | **SOUND INTERMEDIATE FREQUENCY:** | 5.5 MHz |
| VHF (H) | S8 - S10, 5 -12, S11 - S36 ch | **MAXIMUM OUTPUT POWER:** | 1.25 W × 2 |
| UHF | S37 - S41, 21 - 69 ch | **10% THD OUTPUT POWER:** | 1 W × 2 |
| **PICTURE TUDE:** | 20", measured diagonally, | **SPEAKER:** | 8 ohm × 2 |
| | 106° degrees deflection | **WEIGHT:** | 16 kg(w/o Accessories) |
| **ANTENNA:** | 75 Ohm cable for external | **DIMENSIONS:** | 580(W)×374(H)×435(D)mm |
| | VHF/UHF antenna | | |

Design and specification are subject to change without notice.

## SERVICING NOTICES ON CHECKING

### 1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

### 2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

### 3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

### 4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

### 5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

### 6. AVOID AN X-LAY

Safety is secured against an X-lay by considering about the cathode-ray tube and the high voltage
peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-lay from the cathode-ray tube.

### 7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

**(INSULATION CHECK PROCEDURE)**

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

**[Note 1]**
If you have not the 500V insulation resistance meter, use a Tester.

**[Note 2]**
External exposure metal: Antenna terminal
Earphone jack

## HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the CHASSIS CODE.)

1. MODEL NUMBER and CHASSIS CODE
   You can find it in the back of your unit.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

## IMPORTANT

Inferior silicon grease can damage IC's and transistors.
When replacing an IC's or transistors, use only specified silicon grease (YG6260M).
Remove all old silicon before applying new silicon.

# CONTENTS

PAGE
SPECIFICATIONS ........ COVER
SERVICING NOTICES ON CHECKING ........ 1
HOW TO ORDER PARTS ........ 1
IMPORTANT ........ 1
CONTENTS ........ 2
DISASSEMBLY INSTRUCTIONS ........ 3, 4

ELECTRICAL ADJUSTMENTS

1.BEFORE MAKING ELECTRICAL ADJUSTMENTS ........ 5

2.BASIC ADJUSTMENTS

2 - 1 : VCO AND TRAP ........ 5
2 - 2 : AFT ........ 6
2 - 3 : AGC ........ 6
2 - 4 : CONSTANT VOLTAGE ........ 6
2 - 5 : CUT OFF ........ 6
2 - 6 : VERTICAL POSITION ........ 6
2 - 7 : HORIZONTAL POSITION ........ 6
2 - 8 : FORCUS ........ 6
2 - 9 : BRIGHT (TV) ........ 6
2 -10: COLOR (TV) ........ 7
2 -11: BRIGHT (AUX) ........ 7
2 - 12: COLOR (AUX) ........ 7
2 - 13: FULL MODE (H.SIZE, V.SIZE, PARABOLA) ........ 7
2 - 14: SMOOTH MODE (H.SIZE, V.SIZE, PARABOLA) ........ 7
2 - 15: NORMAL MODE (H.SIZE, V.SIZE, PARABOLA) ........ 7
2 - 16: CORNER CORR ........ 8
2 - 17: TRAPEZEOID DIS ........ 8

3.PURITY AND CONVERGENCE ADJUSTMENT

3 - 1 : STATIC CONVERGENCE(ROUGH ADJUSTMENT) ........ 9
3 - 2 : PURITY ........ 9
3 - 3 : STATIC CONVERGENCE ........ 9
3 - 4 : DYNAMIC CONVERGENCE ........ 9
MAJOR COMPONENTS LOCATION GUIDE ........ 10
BLOCK DIAGRAM ........ 11

PRINTED CIRCUIT BOARDS

MAIN ........ 12, 13
CRT / TTEXT / IF ........ 14

SCHEMATIC DIAGRAMS

MICON ........ 15
A/V SWITCH / AUDIO ........ 16
CHROMA ........ 17
DEFLECTION ........ 18
TUNER / POWER ........ 19
WIDE ........ 20
IF ........ 21
AKB / CRT ........ 22
TTEXT ........ 23
WAVWFORMS ........ 24 ~ 27
MECHANICAL EXPLODED VIEW ........ 28
MECHANICAL REPLACEMENT PARTS LIST ........ 29
ELECTRICAL REPLACEMENT PARTS LIST ........ 30 ~ 32

# DISASSEMBLY INSTRUCTIONS

## 1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

- After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
- Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

**REMOVAL**

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

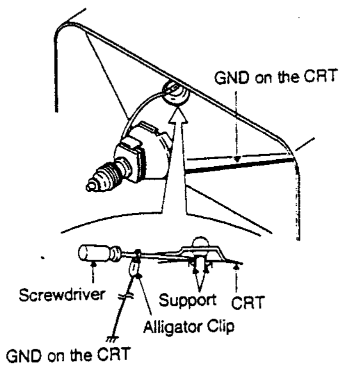


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 1-2.)**

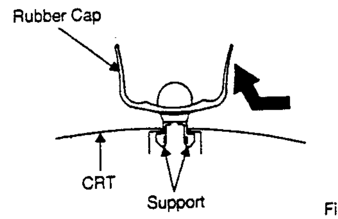


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

**NOTE**

Take care not to damage the Rubber Cap.

**INSTALLATION**

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

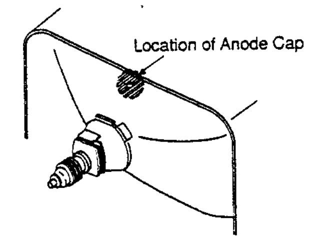


Fig. 1-3

**NOTE**

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**

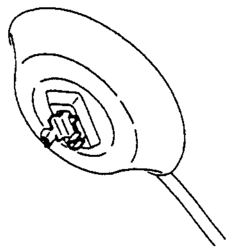


Fig. 1-4

# DISASSEMBLY INSTRUCTIONS

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5**.

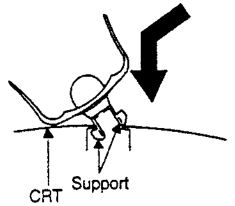


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

## 2. REMOVAL OF DEFLECTION YOKE

**(Refer to Fig. 2-1)**

1. Loosen the screw ①.
2. Remove the Convergence • Purity Magnet in the direction of arrow (A).
3. Loosen the screw ②.
4. Remove the 3 Wedges.
5. Remove the Deflection Yoke in the direction of arrow (B).

**INSTALLATION**

Install new Deflection Yoke in reverse steps of REMOVAL.

**NOTE**

After adjusting the purity and the convergence, fix the screw ② and lock the wedges.

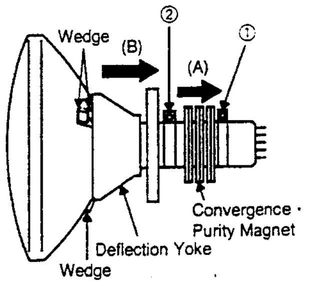


Fig. 2-1

# ELECTRICAL ADJUSTMENTS

## 1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

**CAUTION**

Use an isolation transformer when performing any service on this chassis.

Before removing the anode cap, discharge electricity because it contains high voltage.

When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.

Inferior silicon grease can damage IC's and transistors. When replacing IC's and transistors, use only specified silicon grease (YG6260M).
Remove all old silicon before applying new silicon.

**1-1: Prepare the following measurement tools for electrical adjustments.**

1. Sweepmarker Generator
2. Oscilloscope
3. Digital Voltmeter
4. Color Bar Generator

## 2. BASIC ADJUSTMENTS

**On-Screen Display Adjustment**

Do not set the CLOCK, and sound to minimum.
Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously to appear the adjustment mode on the screen as shown in **Fig. 2-1**, **2-2**, **2-3** and **2-4**.

**NOTE**

Use the 1 - 7 keys on the remote control to select the options.
Press the 8 key to end the adjustments.

1. AUTO
2. BRIGHT AUTO
3.
4.
5.
6.
7. CONTRAST
8. END

Fig. 2-1

1. CUT OFF
2. AGC
3. V. POSI.
4. BRIGHT
5. COLOR
6. TINT
7.
8. END

Fig. 2-2

1. FULL
2. SMOOTH
3. NORMAL
4. H CORR
5. V CORR
6. CORNER CORR
7. TRAPEZEOID DIS
8. END

Fig. 2-3

1. BRIGHT
2. COLOR
3. TINT
4. CONTRAST
8. END

Fig. 2-4

**2-1: VCO AND TRAP**

**NOTE**

Connect input and output terminals of sweepmarker generator to the circuit as shown below, then adjust it.

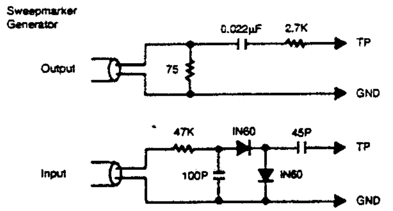


Fig. 2-5

1. Connect the output of sweepmarker generator to **pin 5 of IC6001.**
2. Connect the input of sweepmarker generator to **pin 17 of IC6001.**
3. Connect a 10K ohm variable resistor to IF AGC terminal (**pin 4 of IC6001**), 9V line and ground, then adjust to make the waveform of the oscilloscope readable.
4. Adjust **L6011** until the waveform marker (38.9MHz) becomes as shown in **Fig. 2-6**.

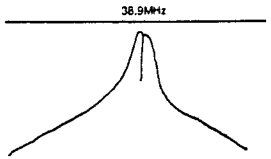


Fig. 2-6

5. Disconnect the 10K ohm variable resistors.
6. Disconnect input and output terminals of the sweepmarker generator.
7. Connect the output of sweepmaker generator to **pin 11 of CP6001**.
8. Connect the input of sweepmaker generator to **pin 2 of CF6004**.
9. Adjust **L6013** until the waveform marker (31.9MHz) becomes as shown in **Fig. 2-7**.

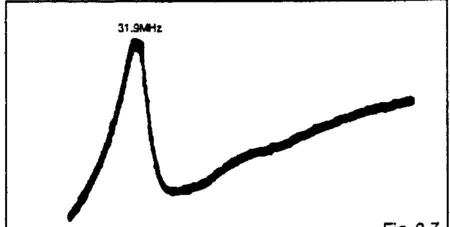


Fig. 2-7

### 2-2: AFT

**NOTE**

Connect input and output terminals of sweepmarker generator to the circuit as shown below, then adjust it.

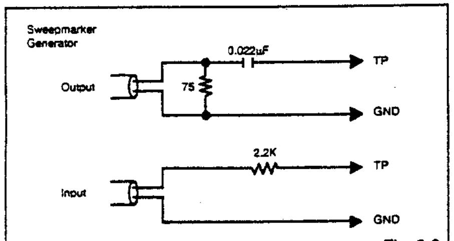


Fig. 2-8

1. Connect the output of sweepmarker generator to **pin 5 of IC6001**.
2. Connect the input of sweepmarker generator to **pin 4 of CP6001**.
3. Adjust **L6012** until the waveform marker (38.9MHz) becomes as shown in **Fig. 2-9**.
4. Disconnect input and output terminals of the sweepmarker generator.
5. Connect the AFT adjustment oscillator (38.9MHz) to the **pin 11 of CP6001** through 2.7K ohm and connect the digital voltmeter to **pin 4 of CP6001**.
6. Adjust **L6012** until the DC voltage is 4.0V ± 0.1V.

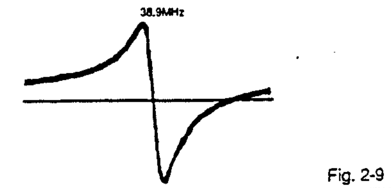


Fig. 2-9

### 2-3: AGC

1. Receive the monochrome pattern.
2. Connect the digital voltmeter to **TP205**.
3. Activate the adjustment mode display (TV) and press the 2 key. **(Refer to Fig. 2-2)**
4. Press the VOL. UP/DOWN key on the remote control until the digital voltage is 3.2V ± 0.1V.

### 2-4: CONSTANT VOLTAGE

1. Set to the AUX1 mode. (No input for AUX)
2. Cange the wide screen mode to FULL.
3. Connect the digital voltmeter to **TP501**.
4. Adjust the **VR501** until the DC voltage is 130V ± 1V.

### 2-5: CUT OFF

1. Set to the AUX1 mode. (No input for AUX)
2. Connect the oscilloscope to **TP802** through the prove 10:1.
3. Adjust the screen volume until the voltage is 140V DC. **(Refer to Fig. 2-10)**

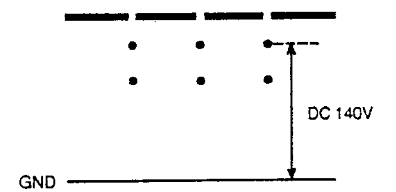


Fig. 2-10

### 2-6: VERTICAL POSITION

1. Receive the monochrome pattern.
2. Activate the adjustment mode display (TV) and press the 3 key. **(Refer to Fig. 2-2)**
3. Press the VOL. UP/DOWN key on the remote control until horizontal line of the color bar comes to approximately the center of the CRT.

### 2-7: HORIZONTAL POSITION

1. Receive the monochrome pattern.
2. Change the wide screen mode to FULL.
3. Adjust **VR601** until the color width of both screen edges are equal.
4. Receive broadcasting signal, then confirm picture is normal.

### 2-8: FOCUS

1. Receive the broadcasting signal.
2. Change the wide screen mode to FULL.
3. Adjust the focus volume until picture is distinct.

### 2-9: BRIGHT (TV)

1. Receive the monochrome pattern. (RF Input)
2. Change the wide screen mode to FULL.
3. Activate the adjustment mode display (TV) and press the 4 key. **(Refer to Fig. 2-2)**
4. Press the VOL. UP/DOWN key on the remote control until 0% of gray scale will begins to lighten.

### 2-10: COLOR (TV)

1. Receive the color bar pattern. (RF Input)
2. Connect the oscilloscope to **TP801** through the prove 10:1.
3. Activate the adjustment mode display (TV) and press the 5 key. **(Refer to Fig. 2-2)**
4. Press the VOL. UP/DOWN key on the remote control until the red color level is adjusted to 75% of the white level. **(Refer to Fig. 2-11)**

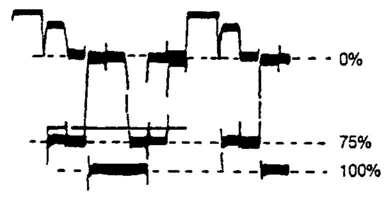


Fig. 2-11

### 2-11: BRIGHT (AUX)

1. Receive the color bar pattern. (21 PIN Input)
2. Activate the adjustment mode display (AUX) and press the 1 key. **(Refer to Fig. 2-4)**
3. Press the VOL. UP/DOWN key on the remote control until 0% of gray scale will begins to lighten.

### 2-12: COLOR (AUX)

1. Receive the color bar pattern. (21 PIN Input)
2. Connect the oscilloscope to **TP801** through the prove 10:1.
3. Activate the adjustment mode display (AUX) and press the 2 key. **(Refer to Fig. 2-4)**
4. Press the VOL. UP/DOWN key on the remote control until the red color level is adjusted to 75% of the white level. **(Refer to Fig. 2-11)**

### 2-13: FULL MODE (H. SIZE, V. SIZE, PARABOLA)

1. Receive the monochrome pattern.
2. Activate the adjustment mode display (WIDE) and press the 1 key. **(Refer to Fig. 2-3)**
3. Press the 1 key. **(Refer to Fig. 2-12)**
4. Press the VOL. UP/DOWN key on the remote control until the horizontal overscan is 9% ± 2%.
5. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
6. Press the 3 key. **(Refer to Fig. 2-12)**
7. Press the VOL. UP/DOWN key on the remote control until the vertical overscan is 8% ± 2%.
8. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
9. Press the 2 key. **(Refer to Fig. 2-12)**
10. Press the VOL. UP/DOWN key on the remote control until the vertical line is straight.

FULL
1. H. SIZE
2. PARABOLA CORR
3. V. SIZE

Fig. 2-12

### 2-14: SMOOTH MODE (H. SIZE, V. SIZE, PARABOLA)

1. Receive the monochrome pattern.
2. Activate the adjustment mode display (WIDE) and press the 2 key. **(Refer to Fig. 2-3)**
3. Press the 1 key. **(Refer to Fig. 2-13)**
4. Press the VOL. UP/DOWN key on the remote control until the horizontal overscan is 9% ± 1%.
5. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
6. Press the 3 key. **(Refer to Fig. 2-13)**
7. Press the VOL. UP/DOWN key on the remote control until the vertical overscan is 15% ± 2%.
8. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
9. Press the 2 key. **(Refer to Fig. 2-13)**
10. Press the VOL. UP/DOWN key on the remote control until the vertical line is straight.

SMOOTH
1. H. SIZE
2. PARABOLA CORR
3. V. SIZE

Fig. 2-13

### 2-15: NORMAL MODE (H. BLANKING, H. SIZE, V. SIZE, PARABOLA)

1. Receive the monochrome pattern.
2. Change the wide screen mode to NORMAL.
3. Adjust **VR602** until the width of both screen edges are equal.
4. Activate the adjustment mode display (WIDE) and press the 3 key. **(Refer to Fig. 2-3)**
5. Press the 1 key. **(Refer to Fig. 2-14)**
6. Press the VOL. UP/DOWN key on the remote control until the picture size is 320mm ± 5mm.
7. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
8. Press the 3 key. **(Refer to Fig. 2-14)**
9. Press the VOL. UP/DOWN key on the remote control until the vertical overscan is 8% ± 2%.
10. Press the VOL. DOWN key on the set and the 9 key on the remote control simultaneously.
11. Press the 2 key. **(Refer to Fig. 2-14)**
12. Press the VOL. UP/DOWN key on the remote control until the vertical line is straight.

## ELECTRICAL ADJUSTMENTS

NORMAL
1. H. SIZE
2. PARABOLA CORR
3. V. SIZE

Fig. 2-14

**2-16: CORNER CORR**

1. Receive the cross hatch pattern.
2. Activate the adjustment mode display (WIDE) and press the 6 key. **(Refer to Fig. 2-3)**
3. Press the VOL. UP/DOWN key on the remote control until the both ends of the vertical lines are straight.

**2-17: TRAPEZEOID DIS**

1. Receive the cross hatch pattern.
2. Activate the adjustment mode display (WIDE) and press the 7 key. **(Refer to Fig. 2-3)**
3. Press the VOL. UP/DOWN key on the remote control until the both vertical lines of the screen become parallel.

## ELECTRICAL ADJUSTMENTS

### 3. PURITY AND CONVERGENCE ADJUSTMENT

**NOTE**

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

**3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)**

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern tc change to white by repeating steps 6 and 7.

**3-2: PURITY**

**NOTE**

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at ends are equally wide.
3. Move the deflection yoke backward (To neck side) slowly, and stop it at the position when the whole screen is green. Confirm red and blue colors.
4. Adjust the slant of the deflection yoke while watching the
5. screen, then tighten the fixing screw.

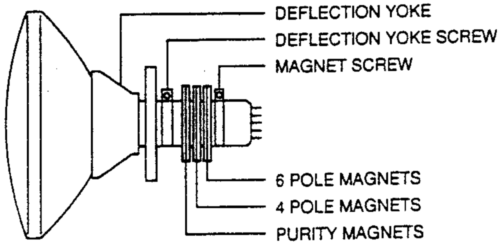


**Fig. 3-1**

**3-3: STATIC CONVERGENCE**

**NOTE**

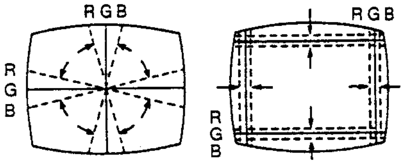
1. Receive the crosshatch pattern from color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

**3-4: DYNAMIC CONVERGENCE**

**NOTE**

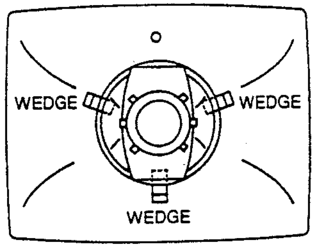
Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

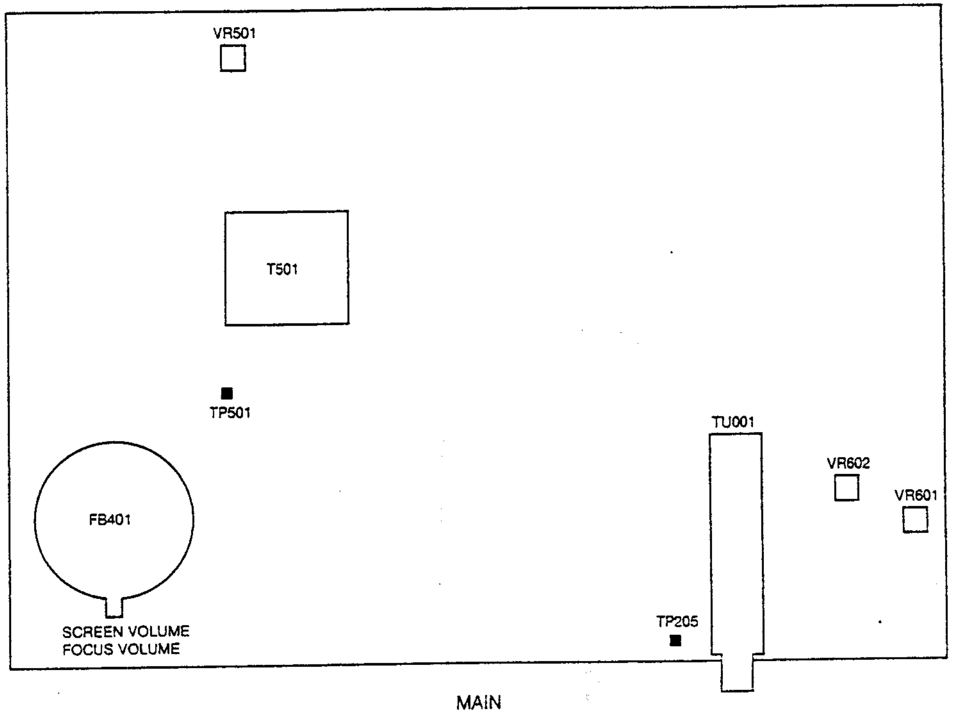
**Fig. 3-2-a**



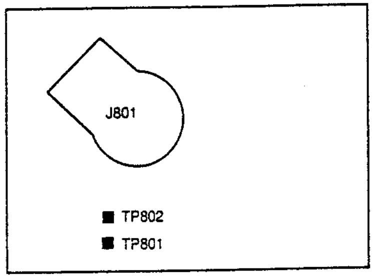
WEDGE POSITION

**Fig. 3-2-b**

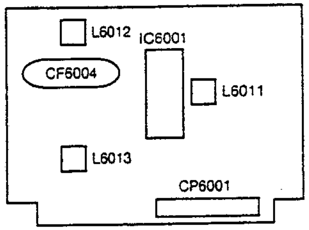
# MAJOR COMPONENTS LOCATION GUIDE


VR501
T501
TP501
TU001
VR602
VR601
FB401
TP205
SCREEN VOLUME
FOCUS VOLUME

MAIN

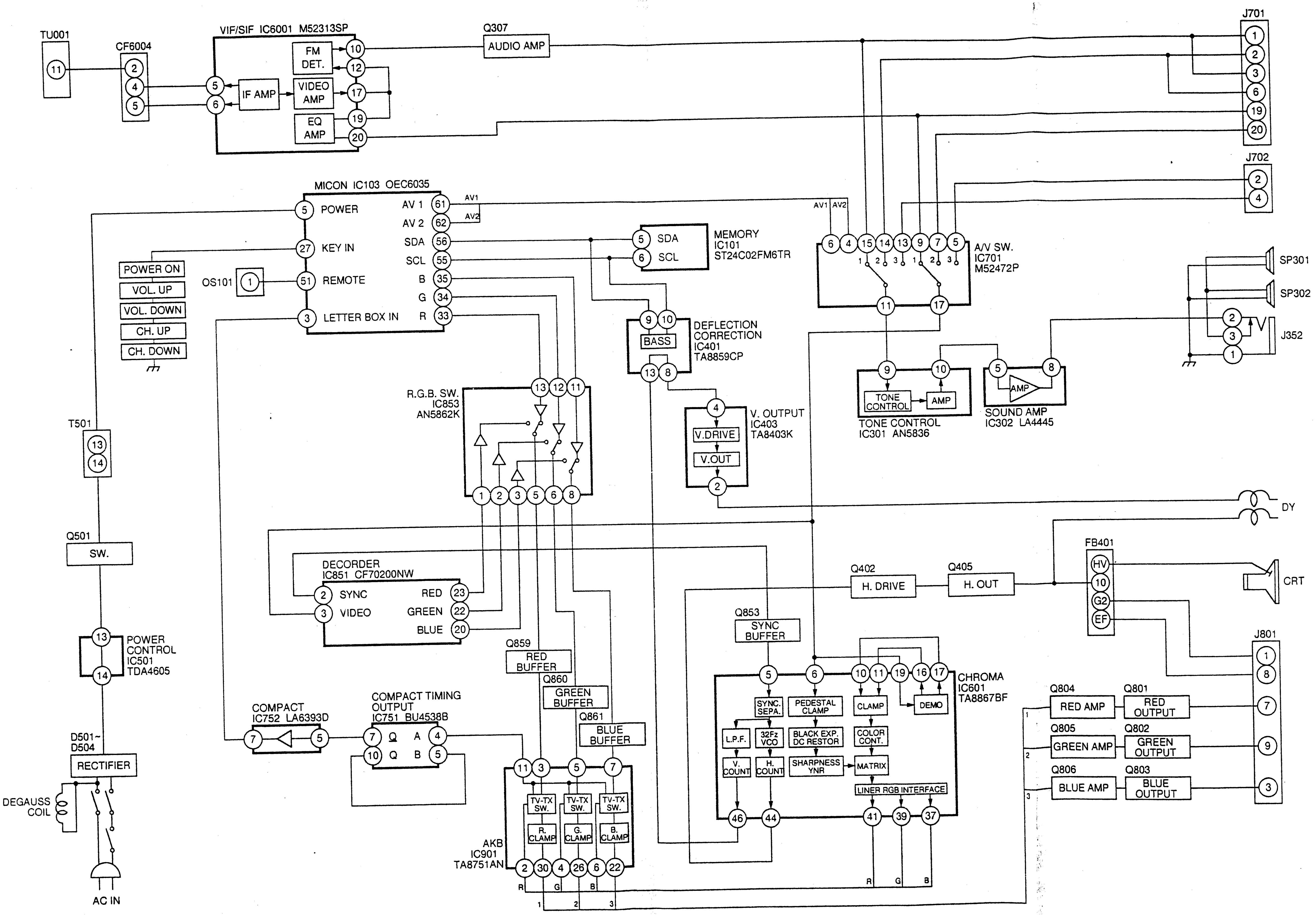

J801
TP802
TP801

CRT


L6012
IC6001
CF6004
L6011
L6013
CP6001

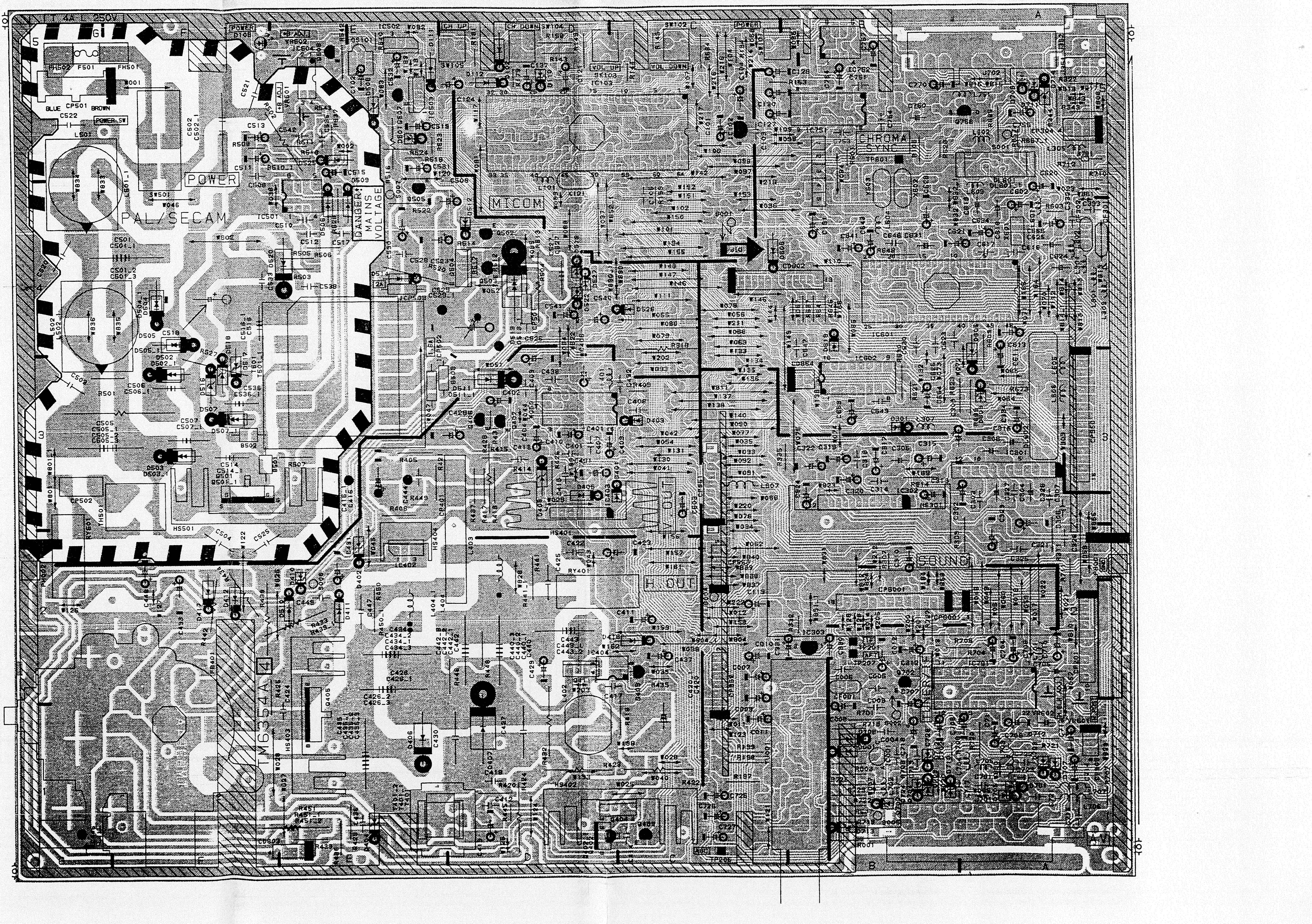
IF

# BLOCK DIAGRAM

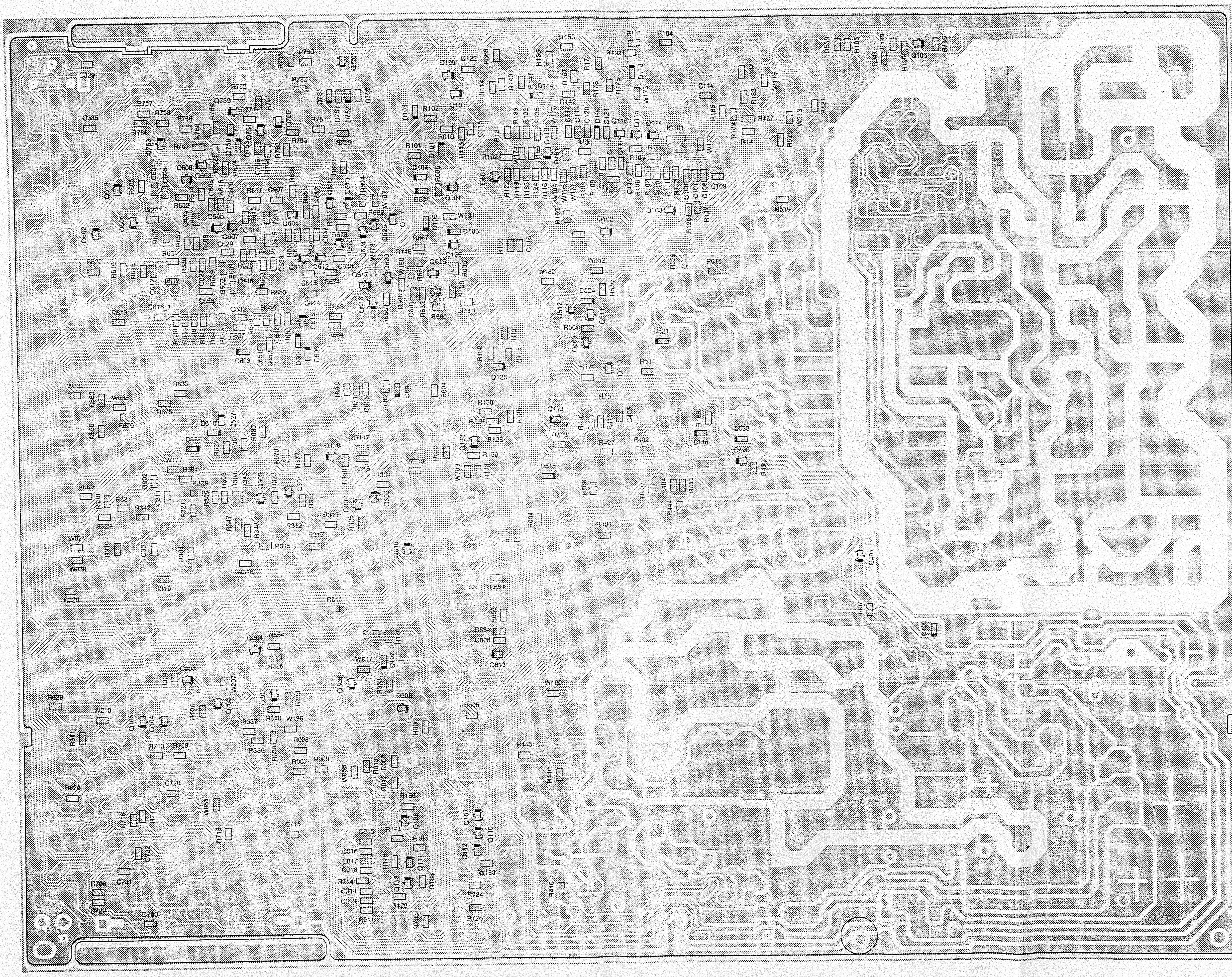


TU001
11
CF6004
2
4
5
VIF/SIF IC6001 M52313SP
IF AMP
FM DET.
VIDEO AMP
EQ AMP
10
12
17
19
20
Q307
AUDIO AMP
J701
1
2
3
6
19
20
J702
2
4
MICON IC103 OEC6035
POWER
KEY IN
REMOTE
LETTER BOX IN
AV 1
AV 2
SDA
SCL
B
G
R
61
62
56
55
35
34
33
27
51
3
AV1
AV2
POWER ON
VOL. UP
VOL. DOWN
CH. UP
CH. DOWN
OS101
MEMORY IC101 ST24C02FM6TR
SDA
SCL
A/V SW. IC701 M52472P
15
14
13
9
7
11
17
SP301
SP302
J352
DEFLECTION CORRECTION IC401 TA8859CP
BASS
R.G.B. SW. IC853 AN5862K
V. OUTPUT IC403 TA8403K
V.DRIVE
V.OUT
TONE CONTROL
AMP
TONE CONTROL IC301 AN5836
SOUND AMP IC302 LA4445
T501
13
14
Q501
SW.
DY
DECORDER IC851 CF70200NW
SYNC
VIDEO
RED
GREEN
BLUE
23
22
20
FB401
HV
G2
EF
CRT
Q402
H. DRIVE
Q405
H. OUT
Q853
SYNC BUFFER
POWER CONTROL IC501 TDA4605
Q859
RED BUFFER
Q860
GREEN BUFFER
Q861
BLUE BUFFER
J801
CHROMA IC601 TA8867BF
SYNC. SEPA.
PEDESTAL CLAMP
CLAMP
DEMO
L.P.F.
32Fz VCO
BLACK EXP. DC RESTOR
COLOR CONT.
V. COUNT
H. COUNT
SHARPNESS YNR
MATRIX
LINER RGB INTERFACE
46
44
41
39
37
16
Q804
RED AMP
Q801
RED OUTPUT
Q805
GREEN AMP
Q802
GREEN OUTPUT
Q806
BLUE AMP
Q803
BLUE OUTPUT
COMPACT IC752 LA6393D
COMPACT TIMING OUTPUT IC751 BU4538B
Q
A
B
AKB IC901 TA8751AN
TV-TX SW.
R. CLAMP
G. CLAMP
B. CLAMP
30
26
R
G
B
D501~ D504
RECTIFIER
DEGAUSS COIL
AC IN

# PRINTED CIRCUIT BOARDS
## MAIN
### COMPONENT SIDE

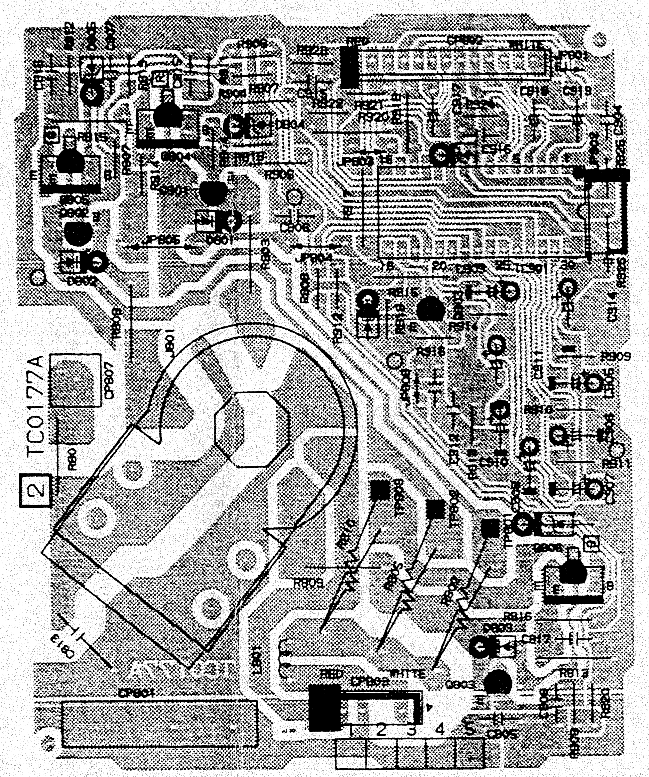

T 4A L 250V
F501
FH501
FH502
BLUE
CP501
BROWN
C522
POWER SW
L501
POWER
SW501
PAL/SECAM
IC501
DANGER! MAINS VOLTAGE
+B ADJ
VR601
CH UP
CH DOWN
SW104
VOL UP
VOL DOWN
SW102
MICOM
CHROMA SYNC
TP601
IC601
IC602
V OUT
H OUT
SOUND
CP8001
IC303
HS401
HS404
HS403
HS501
RY401
IC402
IC404
TM6354A4
CP502
T401
T501
A
B

# PRINTED CIRCUIT BOARDS
# MAIN
## SOLDER SIDE

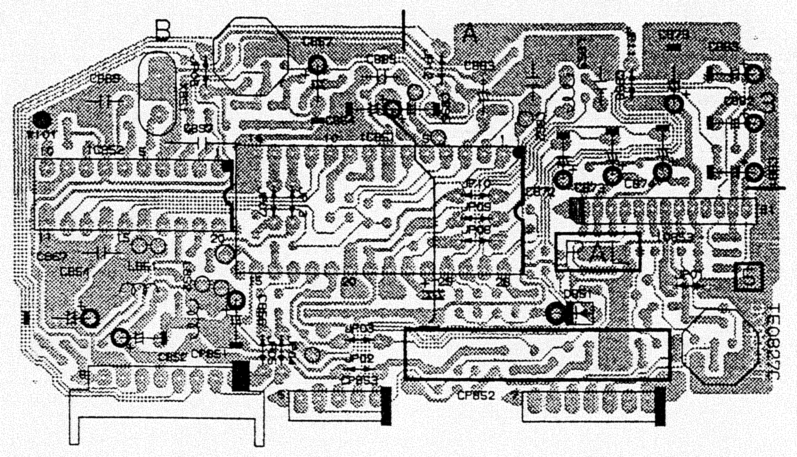


# PRINTED CIRCUIT BOARDS

## CRT

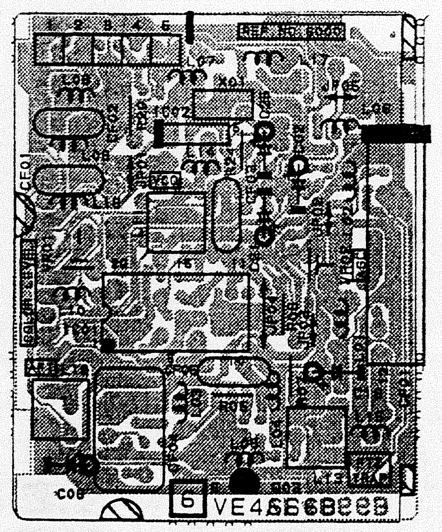


## T'TEXT

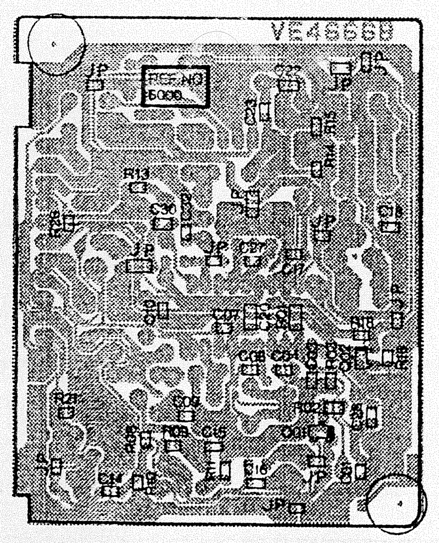


## IF

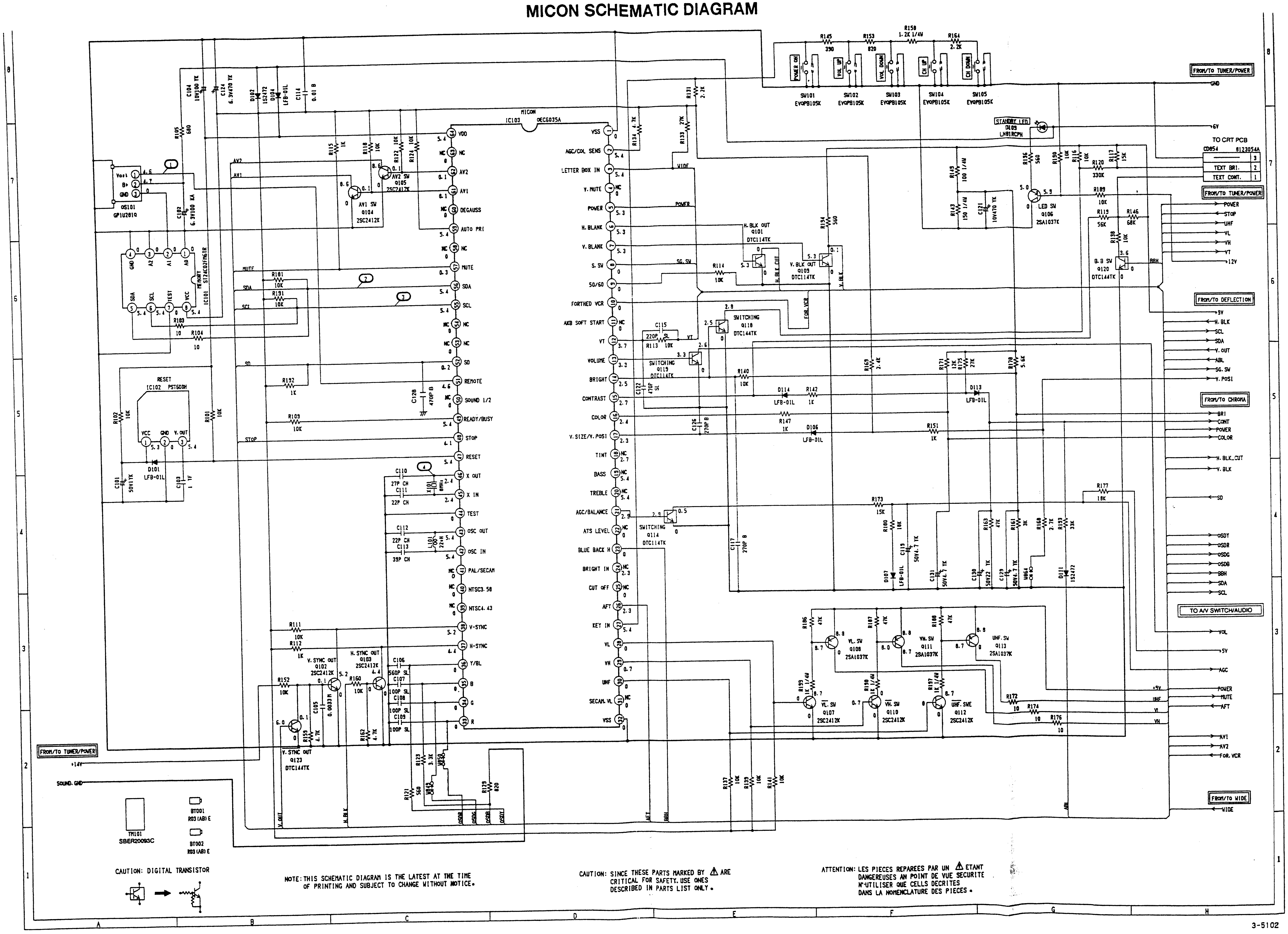
### COMPONENT SIDE



### SOLDER SIDE



# MICON SCHEMATIC DIAGRAM



MICON
IC103 OEC6035A
VDD
NC
AV2
AV1
DEGAUSS
AUTO PRI
MUTE
SDA
SCL
SD
REMOTE
SOUND 1/2
READY/BUSY
STOP
RESET
X OUT
X IN
TEST
OSC OUT
OSC IN
PAL/SECAM
NTSC3.58
NTSC4.43
V-SYNC
H-SYNC
Y/BL
R
G
B
VSS
AGC/COL SENS
LETTER BOX IN
Y.MUTE
POWER
H.BLANK
V.BLANK
S.SW
50/60
FORTHED VCR
AKB SOFT START
VT
VOLUME
BRIGHT
CONTRAST
COLOR
V.SIZE/V.POSI
TINT
BASS
TREBLE
AGC/BALANCE
ATS LEVEL
BLUE BACK H
BRIGHT IN
CUT OFF
AFT
KEY IN
VL
VH
UHF
SECAM.VL
MEMORY
IC101 ST24C02FM6TR
RESET
IC102 PST600H
OS101
GP1U281Q
Vout
B+
GND
SW101
SW102
SW103
SW104
SW105
EVQPB105K
POWER ON
VOL UP
VOL DOWN
CH UP
CH DOWN
STANDBY LED
D109
LN81RCPH
LED SW
Q106
2SA1037K
AV1 SW
Q104
2SC2412K
AV2 SW
Q105
2SC2412K
H.BLK OUT
Q101
DTC114TK
V.BLK OUT
Q109
DTC114TK
SWITCHING
Q118
DTC144TK
SWITCHING
Q119
DTC114TK
SWITCHING
Q114
DTC114TK
B.B SW
Q120
DTC144TK
V.SYNC OUT
Q102
2SC2412K
H.SYNC OUT
Q103
2SC2412K
V.SYNC OUT
Q123
DTC144TK
VL.SW
Q108
2SA1037K
VH.SW
Q111
2SA1037K
UHF.SW
Q113
2SA1037K
VL.SW
Q107
2SC2412K
VH.SW
Q110
2SC2412K
UHF.SWE
Q112
2SC2412K
FROM/TO TUNER/POWER
GND
6V
TO CRT PCB
CD854
TEXT BRI.
TEXT CONT.
FROM/TO TUNER/POWER
POWER
STOP
UHF
VL
VH
VT
+12V
FROM/TO DEFLECTION
9V
H.BLK
SCL
SDA
V.OUT
ABL
SG.SW
V.POSI
FROM/TO CHROMA
BRI
CONT
POWER
COLOR
H.BLK_CUT
V.BLK
SD
OSDY
OSDR
OSDG
OSDB
BBH
SDA
SCL
TO A/V SWITCH/AUDIO
VOL
5V
AGC
POWER
MUTE
AFT
AV1
AV2
FOR.VCR
FROM/TO WIDE
WIDE
FROM/TO TUNER/POWER
+14V
SOUND.GND
TM101
SBER20093C
BT001
R03(AB)E
BT002
R03(AB)E
CAUTION: DIGITAL TRANSISTOR
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8

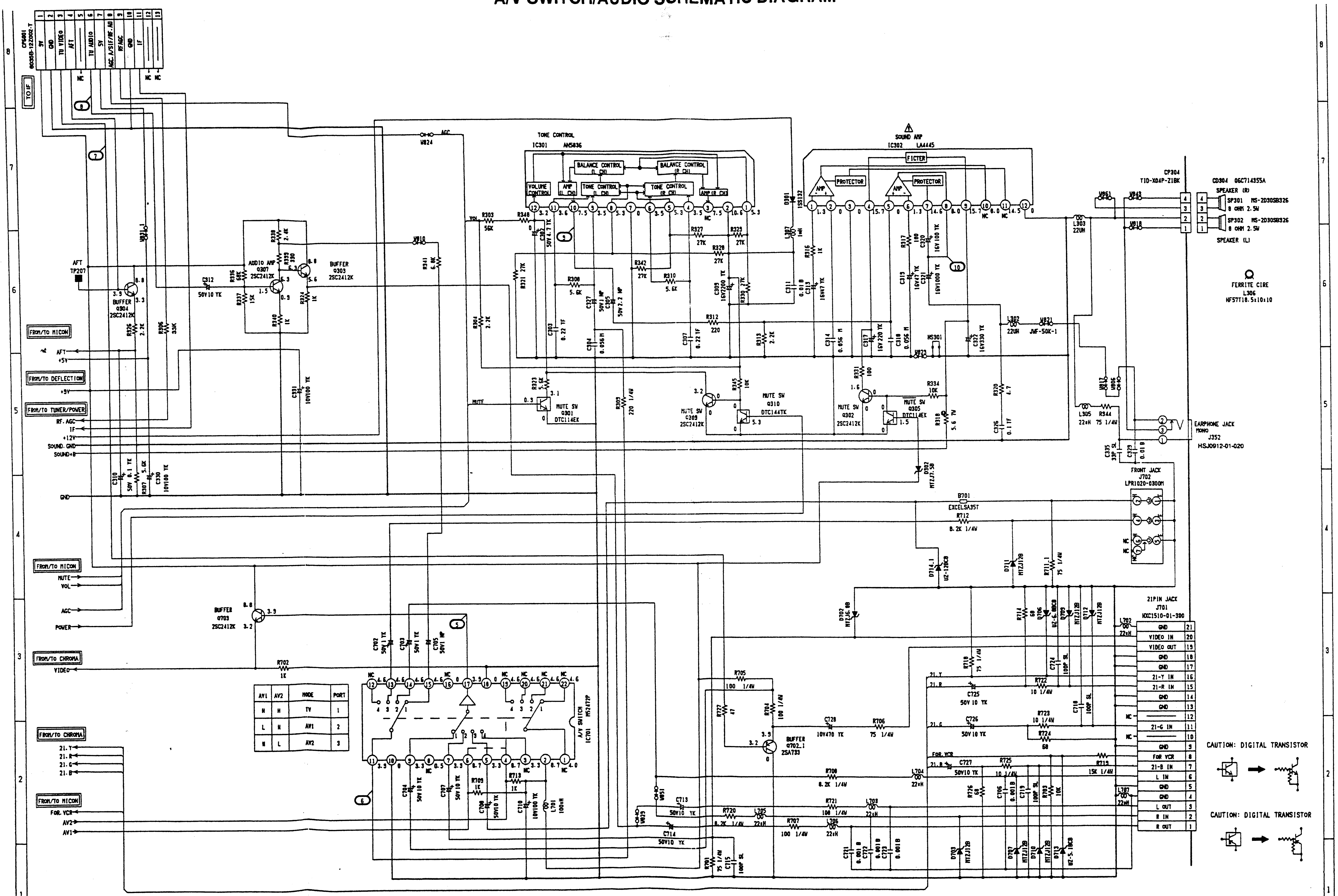
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

3-5102

# A/V SWITCH/AUDIO SCHEMATIC DIAGRAM


CP6001
6035B-122002-T
TO IF
5V
GND
TV VIDEO
AFT
TV AUDIO
5V
AGC, A/SIF/RF.AU
RFAGC
GND
IF
NC
TONE CONTROL
IC301 AN5836
BALANCE CONTROL (L CH)
BALANCE CONTROL (R CH)
VOLUME CONTROL
AMP (L CH)
TONE CONTROL (L CH)
TONE CONTROL (R CH)
AMP (R CH)
SOUND AMP
IC302 LA4445
FILTER
PROTECTOR
AMP
CP304
TID-X04P-Z1BK
CD304 06C714355A
SPEAKER (R)
SP301 MS-2D30SB326 8 OHM 2.5W
SP302 MS-2D30SB326 8 OHM 2.5W
SPEAKER (L)
FERRITE CIRE
L306
HF57T18.5x10x10
AFT
TP207
BUFFER
Q304
2SC2412K
AUDIO AMP
Q307
2SC2412K
BUFFER
Q303
2SC2412K
FROM/TO MICON
AFT
+5V
FROM/TO DEFLECTION
+9V
FROM/TO TUNER/POWER
RF. AGC
IF
+12V
SOUND. GND
SOUND+B
GND
MUTE SW
Q301
DTC114EK
MUTE SW
Q309
2SC2412K
MUTE SW
Q310
DTC144TK
MUTE SW
Q302
2SC2412K
MUTE SW
Q305
DTC114EK
EARPHONE JACK
MONO
J352
HSJ0912-01-020
FRONT JACK
J702
LPR1020-0300M
B701
EXCELSA35T
FROM/TO MICON
MUTE
VOL
AGC
POWER
BUFFER
Q703
2SC2412K
FROM/TO CHROMA
VIDEO
A/V SWITCH
IC701 M52472P
FROM/TO CHROMA
21.Y
21.R
21.G
21.B
FROM/TO MICON
FOR. VCR
AV2
AV1
BUFFER
Q702_1
2SA733
21PIN JACK
J701
NXC1510-01-300
GND
VIDEO IN
VIDEO OUT
GND
GND
21-Y IN
21-R IN
GND
GND
21-G IN
GND
FOR VCR
21-B IN
L IN
GND
GND
L OUT
R IN
R OUT
CAUTION: DIGITAL TRANSISTOR
CAUTION: DIGITAL TRANSISTOR

| AV1 | AV2 | MODE | PORT |
|---|---|---|---|
| H | H | TV | 1 |
| L | H | AV1 | 2 |
| H | L | AV2 | 3 |

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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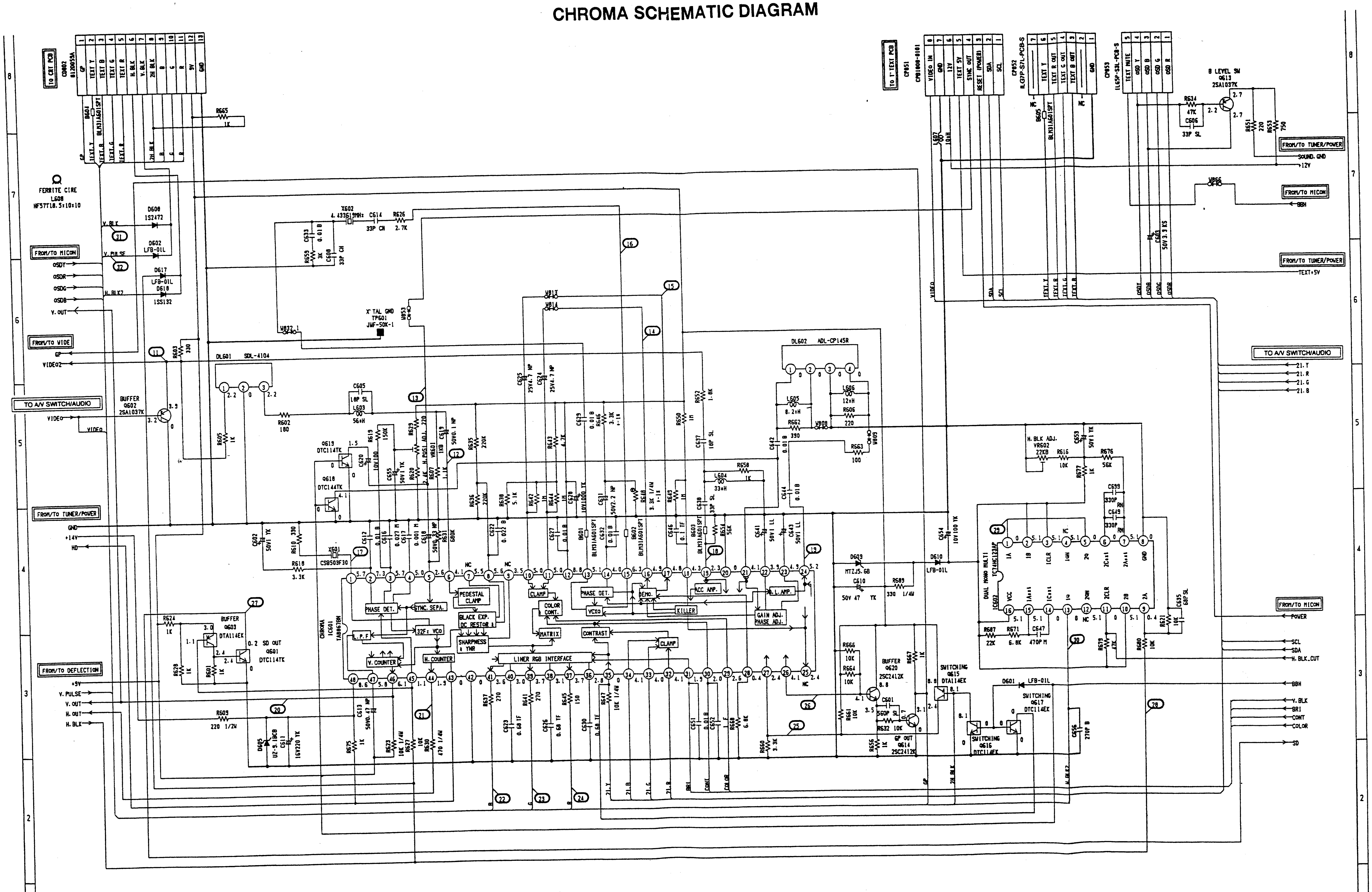
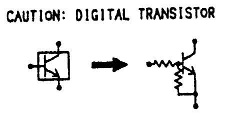
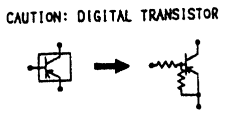
3-5103

# CHROMA SCHEMATIC DIAGRAM



TO CRT PCB
CO602 8120055A
GP
TEXT Y
TEXT B
TEXT G
TEXT R
H.BLK
V.BLK
2H BLK
B
G
R
9V
GND
B604 BLM31A601SPT
R665 1K
FERRITE CIRE L608 HF57T18.5×10×10
D608 1S2472
D602 LFB-01L
D617 LFB-01L
D618 1SS132
V.BLK
V.PULSE
H.BLK2
FROM/TO MICON
OSDY
OSDR
OSDG
OSDB
V.OUT
FROM/TO VIDE
GP
VIDEO2
TO A/V SWITCH/AUDIO
VIDEO
BUFFER Q602 2SA1037K
R603 330
R605 1K
X602 4.433619MHz
C614 33P CH
R626 2.7K
C633 0.018
R659 3K
C608 33P CH
X'TAL GND TP601 JWF-50K-1
W853
W832
DL601 SDL-4104
C605 10P SL
L603 56μH
R602 180
Q619 DTC114TK
Q618 DTC144TK
R619 150K
C620 10V100
C655 50V1 YK
R620
R629 220
VR601 H.POSI ADJ.
C619 50V0.1 NP
R635 220K
R636 220K
R638 5.1K
C622 0.022 B
C625 25V4.7 NP
C624 25V4.7 NP
W813
W814
C629 0.018
R646 3.3K
R643 4.7K
R642
R644
C628
C627 0.018
B601 BLM31A601SPT
C632 50V2.2 NP
B602 BLM31A601SPT
R648 3.3K 1/4W
R645 1M
R650 1M
R652 1.8K
C637 10P SL
C646 0.1 TF
B603 BLM31A601SPT
C638 33P SL
R651 56K
L604 33μH
R658 1K
C641 50V1 LL
C643 50V1 LL
C644 0.018
C642 0.018
DL602 ADL-CP145R
L605 8.2μH
L606 12μH
R606 220
R662 390
W808
W809
R663 100
C602 50V1 YK
R610 330
R618 3.3K
X601 CSB503F30
C612
C616 0.018
C617 0.027 M
C618 0.001 M
C615 50V0.33 NP
R631 680K
IC601 TA8659N CHROMA
PHASE DET.
SYNC. SEPA.
PEDESTAL CLAMP
BLACK EXP. DC RESTOR
32F VCO
L.P.F
V. COUNTER
H. COUNTER
SHARPNESS & YNR
LINER RGB INTERFACE
CLAMP
COLOR CONT.
MATRIX
PHASE DET.
VCXO
DEMO.
ACC AMP.
KILLER
B.L.AMP.
GAIN ADJ. PHASE ADJ.
CONTRAST
NC
FROM/TO TUNER/POWER
GND
+14V
HD
R624 1K
BUFFER Q603 DTA114EK
Q601 DTC114TK
SD OUT
R628 1K
R601 1K
FROM/TO DEFLECTION
+9V
V.PULSE
V.OUT
H.OUT
H.BLK
R609 220 1/2W
D605 UZ-9.1BCB
C611 16V220 YK
R675 1K
C613 50V0.47 NP
R623 10K 1/4W
R627 10K
R630 470 1/4W
R637 270
C623 0.68 TF
R641 270
C626 0.68 TF
R645 150
C630 0.68 TF
R647 10K 1/4W
C651 0.018
C652 1 F
R668 6.8K
R660 3.3K
D609 MTZJ5.6B
C610 50V 47 YK
R689 330 1/4W
D610 LFB-01L
C654 10V100 YK
R666 10K
R664 10K
R661 10K
BUFFER Q620 2SC2412K
C601 560P SL
R632 10K
R656 1K
GP OUT Q614 2SC2412K
R667 1K
SWITCHING Q615 DTA114EK
SWITCHING Q616 DTC114EK
SWITCHING Q617 DTC114EK
D601 LFB-01L
C656 270P B
H.BLK ADJ. VR602 22KB
R616 10K
C653 50V1 YK
R676 56K
R677 1K
C699 330P RH
C649 330P RH
IC602 TC74HC123AP DUAL MONO MULTI
R687 22K
R671 6.8K
C647 470P M
R679 47K
R680 10K
R621 10K
C635 68P SL
TO T-TEXT PCB
CP851 CP81008-0101
VIDEO IN
GND
12V
TEXT 5V
SYNC OUT
RESET (POWER)
SDA
SCL
CP852 RLC77P-S7L-PCB-S
TEXT Y
TEXT R OUT
TEXT G OUT
TEXT B OUT
GND
NC
CP853 IL65P-S3L-PCB-S
TEXT MUTE
OSD Y
OSD B
OSD G
OSD R
L607 10μH
B605 BLM31A601SPT
B LEVEL SW Q613 2SA1037K
R634 47K
C606 33P SL
R651 220
R653 750
FROM/TO TUNER/POWER
SOUND.GND
12V
W866
FROM/TO MICON
BBH
C603 50V3.3 KS
FROM/TO TUNER/POWER
TEXT+5V
TO A/V SWITCH/AUDIO
21.Y
21.R
21.G
21.B
FROM/TO MICON
POWER
SCL
SDA
H.BLK.CUT
BBH
V.BLK
BRI
CONT
COLOR
SD


CAUTION: DIGITAL TRANSISTOR


CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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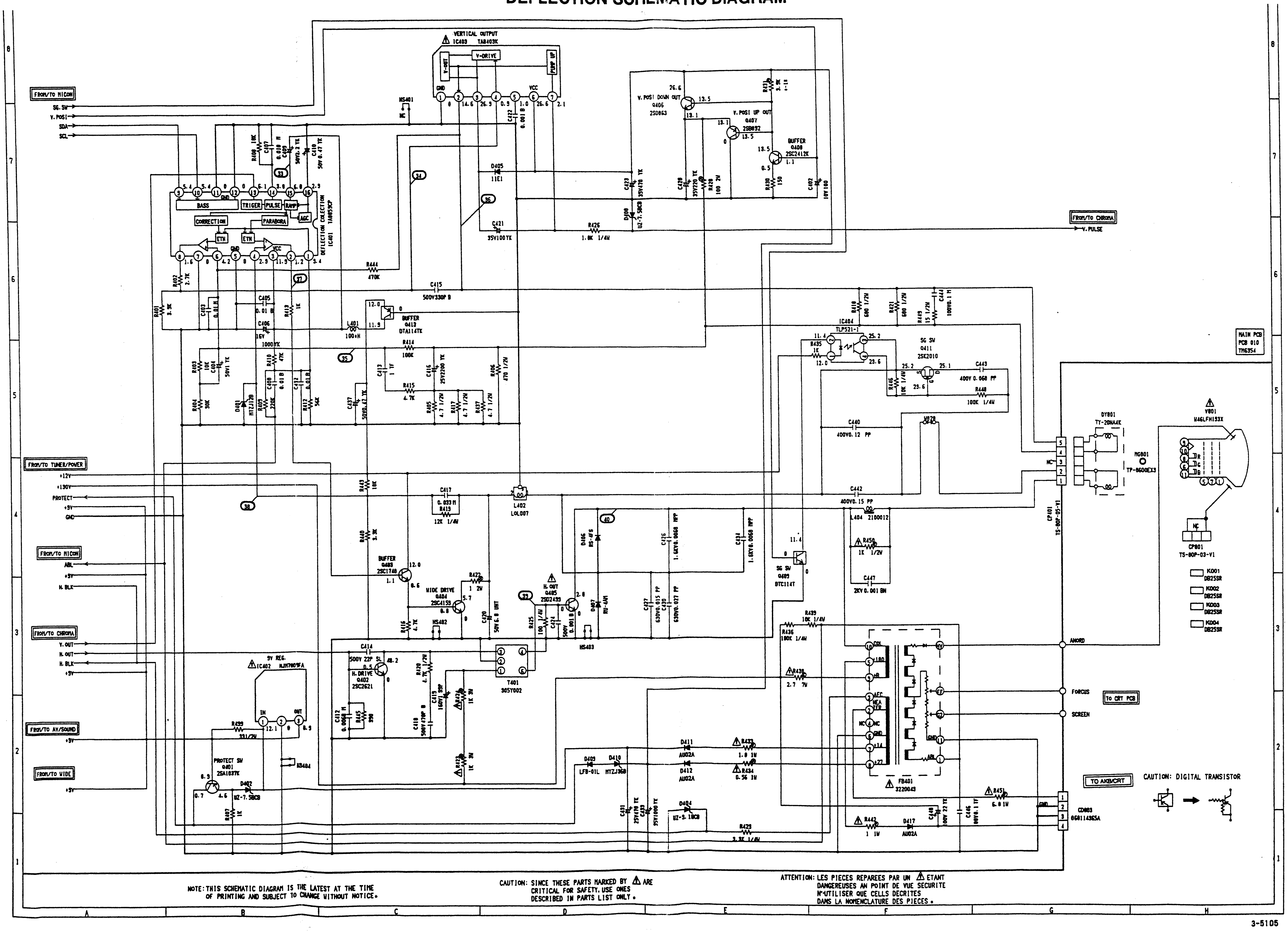
# DEFLECTION SCHEMATIC DIAGRAM



VERTICAL OUTPUT
IC403 TA8403K
V-DRIVE
V-OUT
PUMP UP
GND
VCC
HS401
NC
FROM/TO MICON
SG.SW
V.POSI
SDA
SCL
BASS
TRIGER
PULSE
RAMP
CORRECTION
PARABORA
AGC
ETN
DEFLECTION COLLECTION
IC401 TA8859CP
V.POSI DOWN OUT
Q406
2SD863
V.POSI UP OUT
Q407
2SB852
BUFFER
Q408
2SC2412K
D405
11E1
C421
35V100YK
R426
1.8K 1/4W
FROM/TO CHROMA
V.PULSE
R444
470K
C415
500V330P B
BUFFER
Q413
DTA114TK
L401
100uH
R414
100K
R415
4.7K
IC404
TLP521-1
R435
1K
SG SW
Q411
2SK2010
C443
400V 0.068 PP
R448
100K 1/4W
C440
400V0.12 PP
MAIN PCB
PCB 010
TM6354
DY801
TY-20NA4K
V801
M46LFH133X
MG801
TP-B600EX3
CP801
TS-80P-03-V1
K001
K002
K003
K004
DB25SR
FROM/TO TUNER/POWER
+12V
+130V
PROTECT
+5V
GND
C417
0.033 M
R419
12K 1/4W
L402
LOL007
C442
400V0.15 PP
L404 2100012
R450
1K 1/2W
C447
2KV0.001 BN
CP401
TS-80P-05-V1
FROM/TO MICON
ABL
+5V
H.BLK
BUFFER
Q403
2SC1740
WIDE DRIVE
Q404
2SC4159
HS402
H.OUT
Q405
2SD2499
D406
RS-4FS
D407
RU-4AM
HS403
SG SW
Q409
DTC114T
R439
10K 1/4W
R436
180K 1/4W
R438
2.7 7W
FROM/TO CHROMA
V.OUT
H.OUT
H.BLK
+5V
C414
500V 22P SL
H.DRIVE
Q402
2SC2621
T401
305Y002
5V REG.
IC402 NJM7805FA
IN
OUT
R499
331/2W
FROM/TO AV/SOUND
+5V
PROTECT SW
Q401
2SA1037K
D402
UZ-7.5BCB
HS404
FROM/TO WIDE
+5V
D409
LFB-01L
D410
MTZJ36B
D411
AU02A
D412
AU02A
R433
1.8 1W
R434
0.56 1W
D404
UZ-5.1BCB
R429
3.3K 1/4W
FB401
3220043
COL
180
+B
AFC
HEA
FFR
NC
GND
+14
+27
HV
EF
G2
ABL
ANORD
FORCUS
SCREEN
TO CRT PCB
R451
6.8 1W
R442
1 1W
D417
AU02A
CD803
0601143E5A
TO AKB/CRT
CAUTION: DIGITAL TRANSISTOR
A
B
C
D
E
F
G
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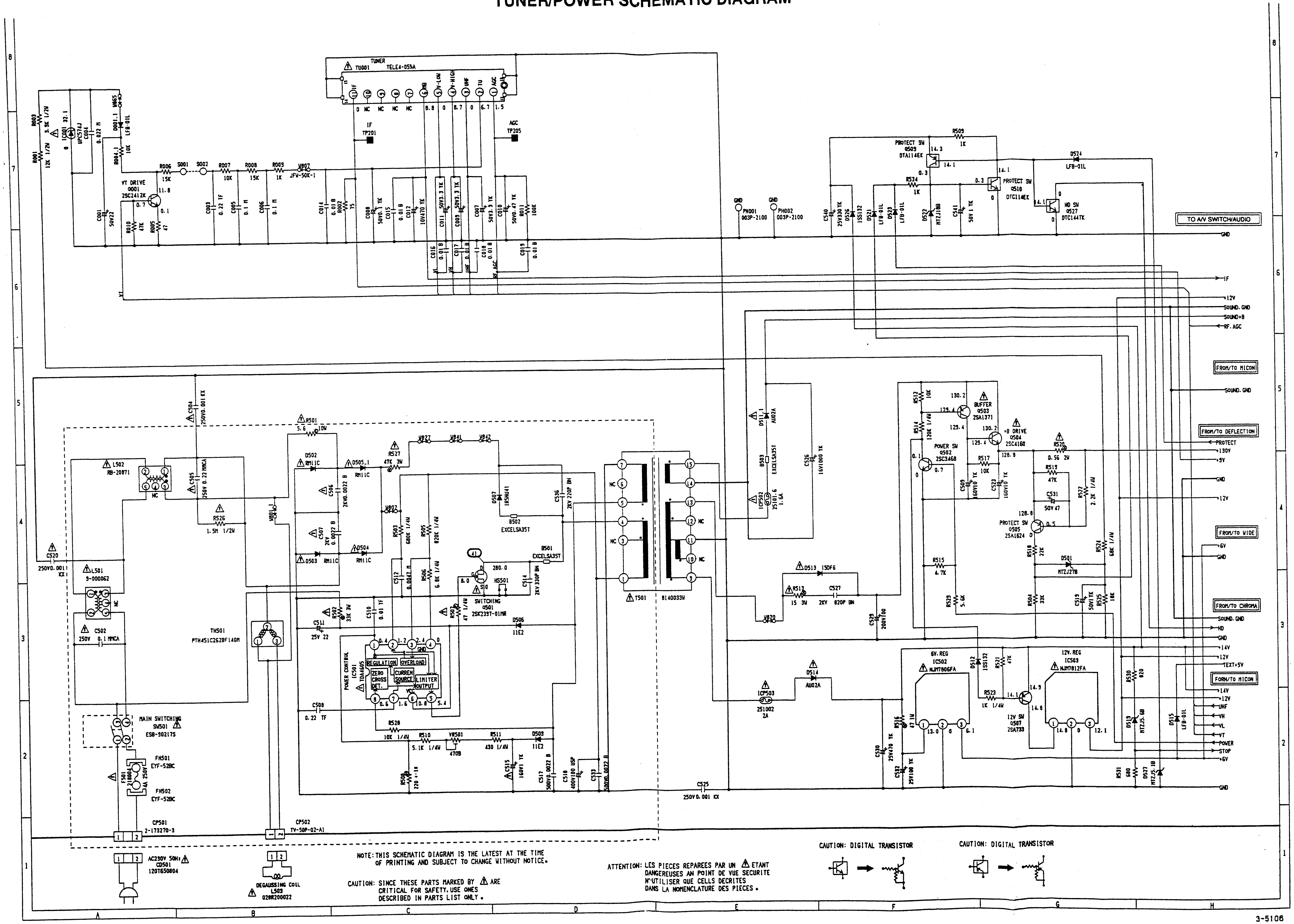
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE
CRITICAL FOR SAFETY, USE ONES
DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES.

# TUNER/POWER SCHEMATIC DIAGRAM



TUNER
TU001 TELE4-055A
IF
TP201
AGC
TP205
NC
V-LOW
V-HIGH
UHF
TU
B
R003 3.3K 1/2W
R001 12K 1/2W
IC001 UPC574J
C004 0.022 M
D001.1 LFB-01L
W065
R004.1 10K
R006 15K
S001
S002
R007 10K
R008 15K
R009 1K
W807 JFV-50K-1
VT DRIVE
Q001 2SC2412K
C001 50V22
R010 47K
R005 47
C003 0.22 TF
C005 0.1 M
C006 0.1 M
C014 0.01 B
R002 75
C008 50V0.1 YK
C015 0.01 B
C012 0.01 B
16V470 YK
C011 50V3.3 YK
C009 50V3.3 YK
C007 50V3.3 YK
C010 50V0.47 YK
R011 100K
C016 0.01 B
C017 0.01 B
C018 0.01 B
C019 0.01 B
VT
GND
PH001 003P-2100
PH002 003P-2100
PROTECT SW
Q509 DTA114EK
R509 1K
R534 1K
PROTECT SW Q510 DTC114EK
D524 LFB-01L
HD SW Q527 DTC144TK
C540 25V330 YK
D526 1SS132
D521 LFB-01L
D523 LFB-01L
D522 MTZJ18B
C541 50V1 YK
TO A/V SWITCH/AUDIO
IF
12V
SOUND.GND
SOUND+B
RF.AGC
FROM/TO MICON
SOUND.GND
FROM/TO DEFLECTION
PROTECT
130V
9V
GND
12V
FROM/TO WIDE
6V
GND
FROM/TO CHROMA
SOUND.GND
HD
GND
14V
12V
TEXT+5V
FORM/TO MICON
14V
12V
UHF
VH
VL
VT
POWER
STOP
6V
GND
R512 10K
R514 120K 1/4W
BUFFER Q503 2SA1371
+B DRIVE Q504 2SC4160
POWER SW Q502 2SC3468
R520 0.56 2W
R519 47K
R517 10K
C509 160V10 YK
C523 160V10 YK
C531 50V47
R522 2.2K 1/4W
PROTECT SW Q505 2SA1624
R515 4.7K
R518 22K
D501 MTZJ27B
R524 68K 1/4W
R529 5.6K
R504 33K
C519 50V1 YK
R525 18K
C504 250V0.001 KX
R501 5.6 10W
D502 RM11C
D505.1 RM11C
R527 47K 3W
W827
W841
W842
L502 RB-20871
C505 250V 0.22 MMCA
C506 2KV0.0022 B
C507 2KV0.0022 B
D503 RM11C
D504 RM11C
W802
R503 680K 1/4W
R505 820K 1/4W
D507 1RSNJ41
B502 EXCELSA35T
C536 2KV 220P BN
B501 EXCELSA35T
R526 1.5M 1/2W
W801
C520 250V0.001 KX
L501 9-000062
C512 0.0047 M
R506 6.8K 1/4W
280.0
8.0
HS501
C514 2KV 330P BN
SWITCHING Q501 2SK2397-01MR
R507 47 1/4W
D506 11E2
C502 250V 0.1 MMCA
TH501 PTH451C262BF140M
R502 33K 3W
C510 0.01 TF
C511 25V 22
POWER CONTROL IC501 TDA4605
REGULATION
OVERLOAD
ZERO CROSS DET.
CURREN SOURCE
LIMITER OUTPUT
VCC
GND
C508 0.22 TF
R528
R510 10K 1/4W
VR501 5.1K 1/4W 470B
R511 430 1/4W
D509 11E2
R508 220 +-1%
C515 16V1 YK
C517 500V0.0022 B
C518 400V100 USP
C533 500V0.0022 B
MAIN SWITCHING SW501 ESB-50217S
FH501 EYF-52BC
F501 T1800G 4A 250V
FH502 EYF-52BC
CP501 2-173270-3
CP502 TV-50P-02-A1
AC230V 50Hz CD501 120T650804
DEGAUSSING COIL L503 028R200022
T501 8140033W
D511.1 AU02A
B503 EXCELSA35T
C526 16V1000 YK
ICP502 251016 1.6A
D513 150F6
R513 15 3W
C527 2KV 820P BN
W820
C529 200V100
ICP503 251002 2A
D514 AU02A
C525 250V0.001 KX
6V.REG IC502 NJM7806FA
D512 1SS132
R521 47K
12V.REG IC503 NJM7812FA
R523 1K 1/4W
12V SW Q507 2SA733
R516 47 1W
C530 25V470 YK
C532 25V100 YK
R530 820
R531 680
D519 MTZJ5.6B
D527 MTZJ5.1B
D515 LFB-01L
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NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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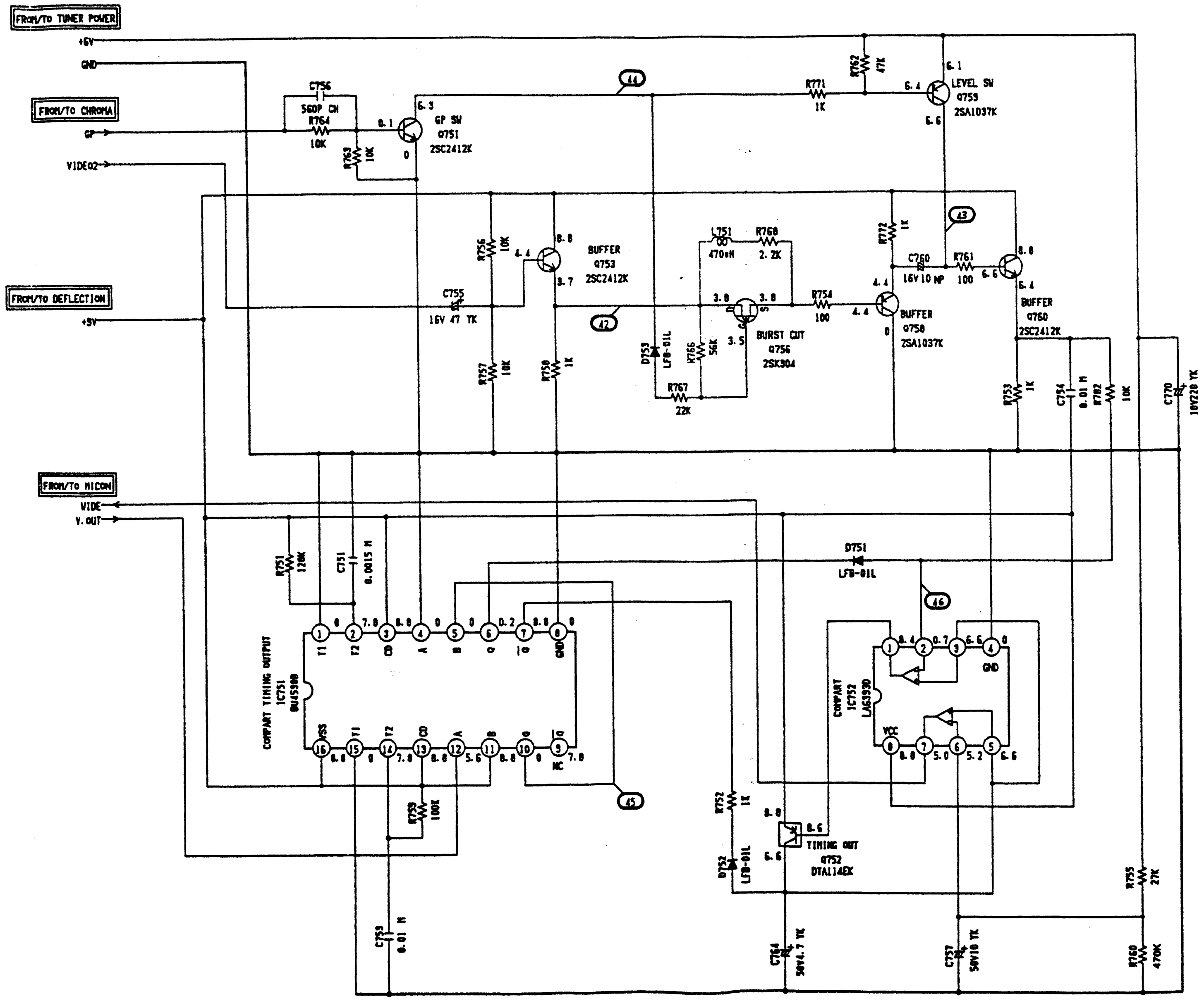
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: DIGITAL TRANSISTOR

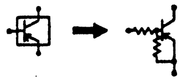
CAUTION: DIGITAL TRANSISTOR

3-5106

# WIDE SCHEMATIC DIAGRAM


FROM/TO TUNER POWER
+6V
GND
FROM/TO CHROMA
GP
VIDEO2
FROM/TO DEFLECTION
+9V
FROM/TO MICON
VIDE
V.OUT
C756
560P CH
R764
10K
R763
10K
GP SW
Q751
2SC2412K
6.3
0.1
0
44
R771
1K
R762
47K
LEVEL SW
Q759
2SA1037K
6.1
6.4
6.6
R756
10K
BUFFER
Q753
2SC2412K
8.8
4.4
3.7
C755
16V 47 YK
R757
10K
R758
1K
42
D753
LFB-01L
R766
56K
R767
22K
L751
470uH
R768
2.2K
3.8
3.8
3.5
BURST CUT
Q756
2SK304
R754
100
4.4
4.4
0
BUFFER
Q758
2SA1037K
R772
1K
43
C760
16V 10 NP
R761
100
6.6
8.8
6.4
BUFFER
Q760
2SC2412K
R753
1K
C754
0.01 M
R782
10K
C770
10V220 YK
R751
120K
C751
0.0015 M
COMPART TIMING OUTPUT
IC751
BU4538B
T1
T2
CD
A
B
Q
Q̄
GND
VSS
NC
0
7.8
8.8
0
0
0.2
8.8
0
8.8
0
7.8
8.8
5.6
8.8
0
7.8
R759
100K
C759
0.01 M
45
D751
LFB-01L
46
COMPART
IC752
LA6393D
VCC
GND
8.4
0.7
6.6
0
8.8
5.0
5.2
6.6
R752
1K
D752
LFB-01L
8.8
8.6
6.6
TIMING OUT
Q752
DTA114EK
C764
50V4.7 YK
C757
50V10 YK
R755
27K
R760
470K

CAUTION: DIGITAL TRANSISTOR



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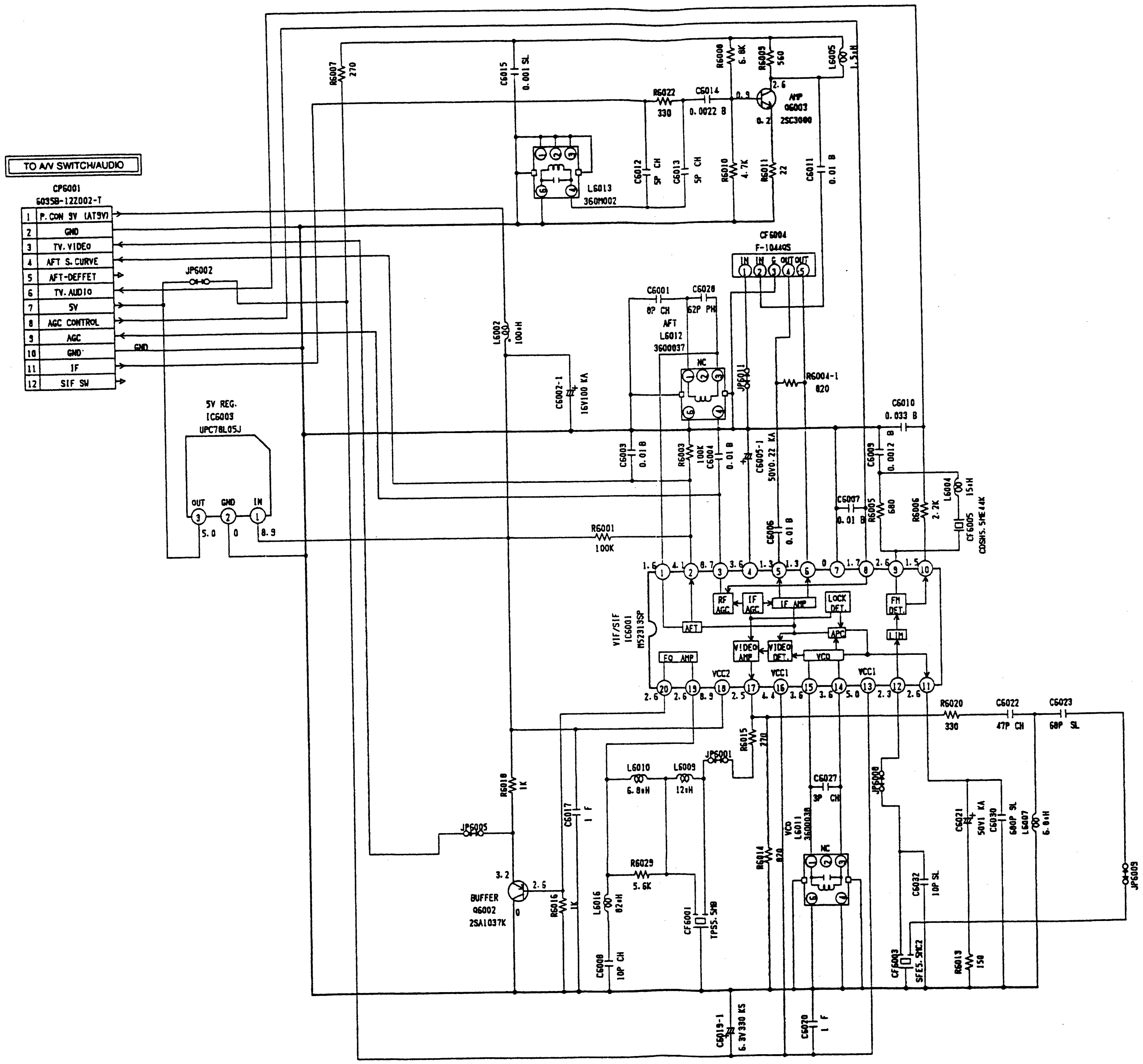
# IF SCHEMATIC DIAGRAM


TO A/V SWITCH/AUDIO
CP6001
6035B-12Z002-T
1 P. CON 9V (AT9V)
2 GND
3 TV. VIDEO
4 AFT S. CURVE
5 AFT-DEFFET
6 TV. AUDIO
7 5V
8 AGC CONTROL
9 AGC
10 GND
11 IF
12 SIF SW
GND
JP6002
5V REG.
IC6003
UPC78L05J
OUT
GND
IN
5.0
0
8.9
R6007
270
C6015
0.001 SL
R6022
330
C6014
0.0022 B
R6008
6.8K
R6009
560
L6005
1.5uH
AMP
Q6003
2SC3000
L6013
360M002
C6012
5P CH
C6013
5P CH
R6010
4.7K
R6011
22
C6011
0.01 B
CF6004
F-1044Q5
IN
IN
G
OUT
OUT
C6001
8P CH
C6028
62P PH
AFT
L6012
3600037
NC
JP6011
R6004-1
820
L6002
100uH
C6002-1
16V100 KA
C6010
0.033 B
C6003
0.01 B
R6003
100K
C6004
0.01 B
C6005-1
50V0.22 KA
C6009
0.0012 B
C6007
0.01 B
R6005
680
R6006
2.2K
L6004
15uH
CF6005
C05H5.5ME44K
C6006
0.01 B
R6001
100K
VIF/SIF
IC6001
M52313SP
RF AGC
IF AGC
IF AMP
LOCK DET.
FM DET.
AFT
APC
LIM
VIDEO AMP
VIDEO DET.
VCO
EQ AMP
VCC2
VCC1
VCC1
1.6
4.1
8.7
3.6
1.3
1.3
0
1.7
2.6
1.5
2.6
2.6
8.9
2.5
4.4
3.6
3.6
5.0
2.3
2.6
R6020
330
C6022
47P CH
C6023
68P SL
R6015
270
JP6001
L6010
6.8uH
L6009
12uH
C6027
3P CH
VCO
L6011
3600038
NC
JP6008
C6021
50V1 KA
C6030
680P SL
L6007
6.8uH
JP6003
R6018
1K
C6017
1 F
JP6005
3.2
2.6
0
BUFFER
Q6002
2SA1037K
R6016
1K
L6016
82uH
R6029
5.6K
C6008
10P CH
CF6001
TPS5.5MB
R6014
820
C6032
10P SL
CF6003
SFE5.5MC2
R6013
150
C6019-1
6.3V330 KS
C6020
1 F

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

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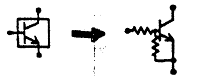
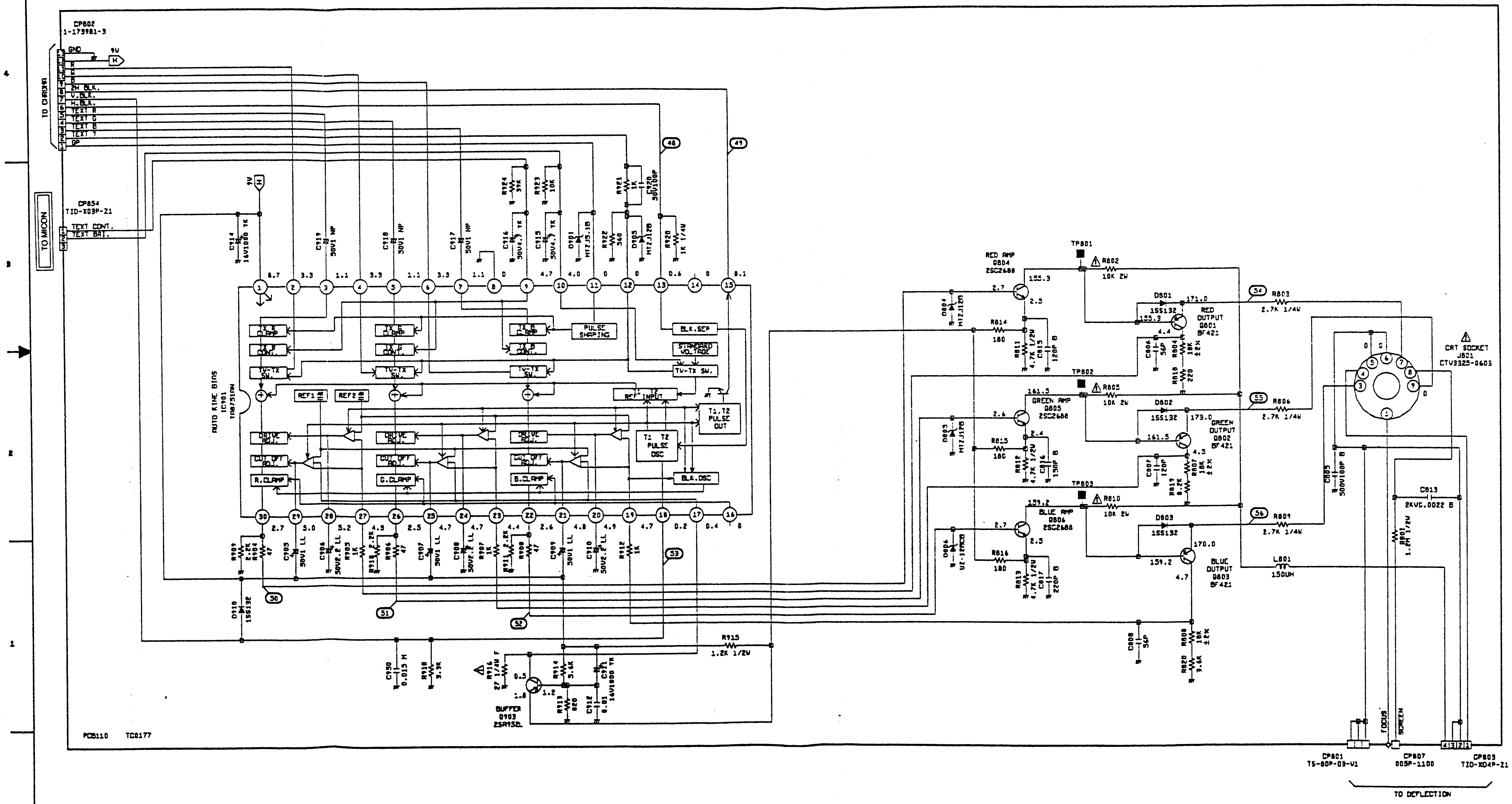
CAUTION: DIGITAL TRANSISTOR



# AKB/CRT SCHEMATIC DIAGRAM


CP802
1-173981-3
TO CHROMA
GND
9V
R
G
B
2H BLK.
V.BLK.
H.BLK.
TEXT R
TEXT G
TEXT B
TEXT Y
DP
TO MICON
CP854
TID-X03P-Z1
TEXT CONT.
TEXT BRI.
C914 16V1000 YK
AUTO KINE BIAS
IC901
TA8751AN
TX R CLAMP
TX R CONT.
TV-TX SW.
TX G CLAMP
TX G CONT.
TX B CLAMP
TX B CONT.
PULSE SHAPING
BLK.SEP
STANDARD VOLTAGE
TV-TX SW.
REF1
REF2
REF INPUT
T1, T2 PULSE OUT
T1 T2 PULSE OSC
DRIVE ADJ.
CUT OFF ADJ.
R.CLAMP
G.CLAMP
B.CLAMP
BLK.OSC
BUFFER
Q903
2SA952L
R915 1.2K 1/2W
C950 0.015 M
R918 9.1K
R916 27 1/4W F
R914 5.6K
R913 820
C912 0.01
C911 16V1000 YK
D910 1SS132
RED AMP
Q804
2SC2688
GREEN AMP
Q805
2SC2688
BLUE AMP
Q806
2SC2688
TP801
TP802
TP803
R802 10K 2W
R805 10K 2W
R810 10K 2W
D801 1SS132
D802 1SS132
D803 1SS132
RED OUTPUT
Q801
BF421
GREEN OUTPUT
Q802
BF421
BLUE OUTPUT
Q803
BF421
R803 2.7K 1/4W
R806 2.7K 1/4W
R809 2.7K 1/4W
L801 150UH
CRT SOCKET
J801
CTV3325-0605
C805 500V100P B
C813 2KVC.0022 B
R801 1.2M 1/2W
FOCUS
SCREEN
CP801
TS-80P-03-V1
CP807
005P-1100
CP803
TID-X04P-Z1
TO DEFLECTION
PCB110 TC0177

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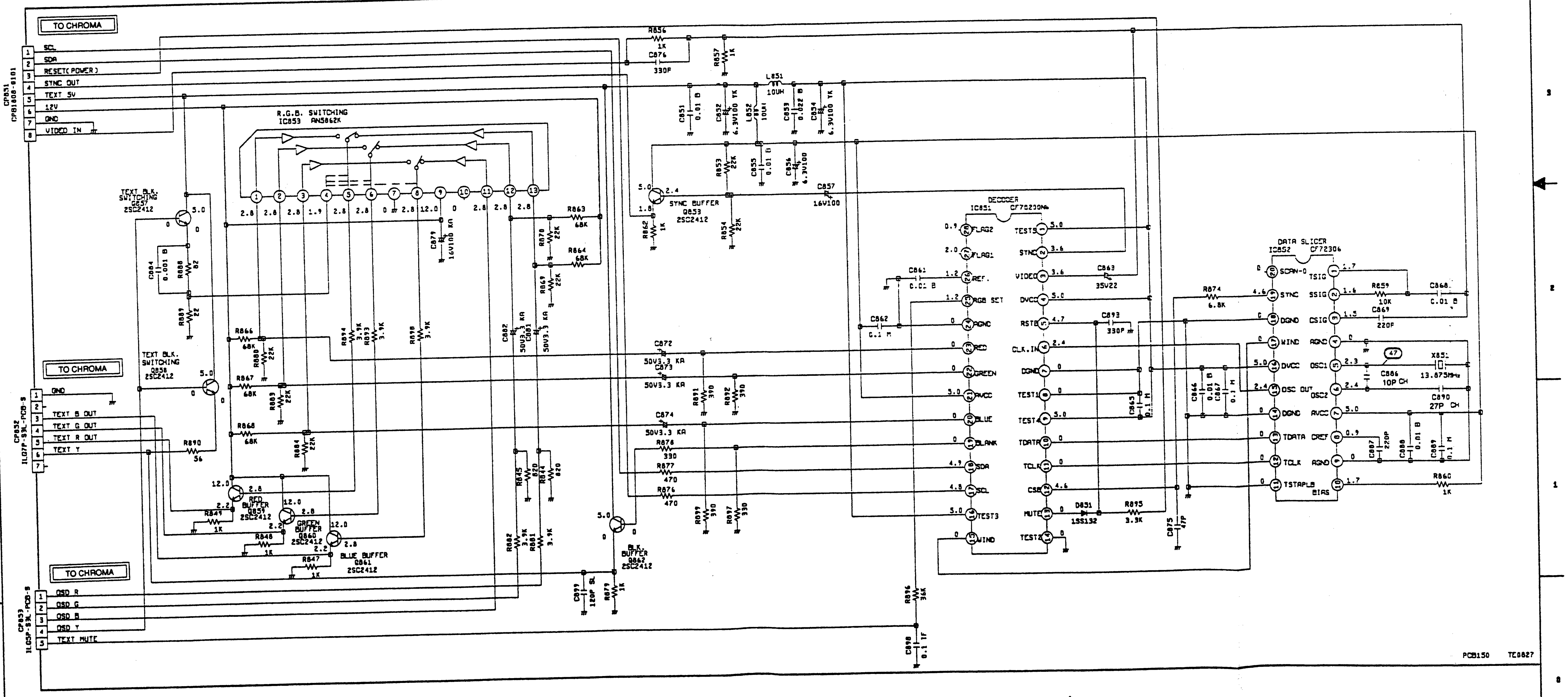
# T'TEXT SCHEMATIC DIAGRAM


TO CHROMA
CP851
CPB1808-9101
1 SCL
2 SDA
3 RESET(POWER)
4 SYNC OUT
5 TEXT 5V
6 12V
7 GND
8 VIDEO IN
R.G.B. SWITCHING
IC853 AN5862K
TEXT BLK. SWITCHING
Q857
2SC2412
C884
0.001 B
R888
82
R889
22
TO CHROMA
CP852
ILG7P-S3L-PCB-S
1 GND
2
3 TEXT B OUT
4 TEXT G OUT
5 TEXT R OUT
6 TEXT Y
7
TEXT BLK. SWITCHING
Q858
2SC2412
R890
56
R866
68K
R880
22K
R867
68K
R883
22K
R868
68K
R884
22K
R894
3.9K
R893
3.9K
R898
3.9K
RED BUFFER
Q859
2SC2412
GREEN BUFFER
Q860
2SC2412
BLUE BUFFER
Q861
2SC2412
R849
1K
R848
1K
R847
1K
TO CHROMA
CP853
ILG5P-S3L-PCB-S
1 OSD R
2 OSD G
3 OSD B
4 OSD Y
5 TEXT MUTE
C879
16V100 KA
R870
22K
R863
68K
R864
68K
R869
22K
C882
50V3.3 KA
C881
50V3.3 KA
R845
820
R885
820
R844
820
R882
3.9K
R881
3.9K
BLK. BUFFER
Q862
2SC2412
C899
120P SL
R879
1K
R856
1K
C876
330P
R857
1K
L851
10UH
C851
0.01 B
C852
6.3V100 YK
L852
10UH
C853
0.022 B
C854
6.3V100 YK
C855
0.01 B
C856
6.3V100
R853
22K
SYNC BUFFER
Q853
2SC2412
R862
1K
R854
22K
C857
16V100
C872
50V3.3 KA
C873
50V3.3 KA
R891
390
R892
390
C874
50V3.3 KA
R878
330
R877
470
R876
470
R899
390
R897
330
R896
36K
C898
0.1 1F
DECODER
IC851 CF70200NA
FLAG2
FLAG1
REF.
RGB SET
AGND
RED
GREEN
AVCC
BLUE
BLANK
SDA
SCL
TEST3
WIND
TEST5
SYNC
VIDEO
DVCC
RSTB
CLK.IN
DGND
TEST1
TEST4
TDATA
TCLK
CSB
MUTE
TEST2
C861
0.01 B
C862
0.1 M
C863
35V22
C893
330P
C865
0.1 M
D851
1SS132
R895
3.3K
C875
47P
DATA SLICER
IC852 CF72306
SCAN-0
SYNC
DGND
WIND
DVCC
OSC OUT
DGND
TDATA
TCLK
TSTAPLB
TSIG
SSIG
CSIG
AGND
OSC1
OSC2
AVCC
CREF
AGND
BIAS
R874
6.8K
C866
0.01 B
C867
0.1 M
R859
10K
C868
0.01 B
C869
220P
47
X851
13.875MHz
C886
10P CH
C890
27P CH
C887
220P
C888
0.01 B
C889
0.1 M
R860
1K
PCB150
TE0827

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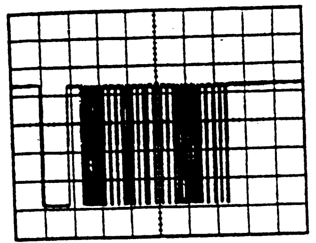
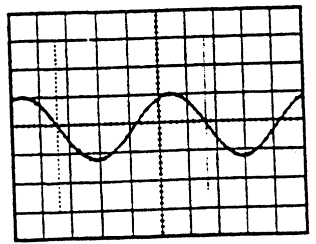
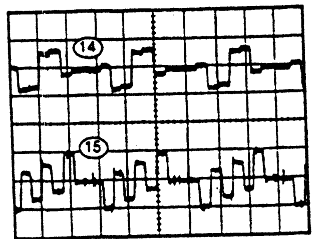
## WAVEFORMS

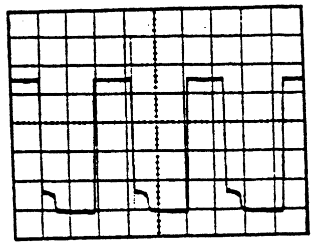
### MICON

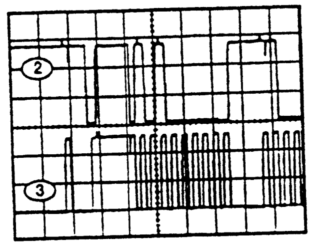

① 1V 10ms/div


⑧ 200mV 200μs/div

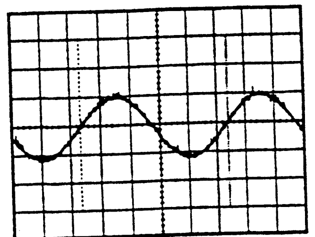


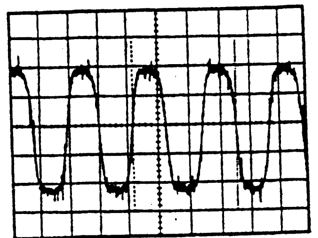
⑭ ⑮ 0.5V 20μs/div

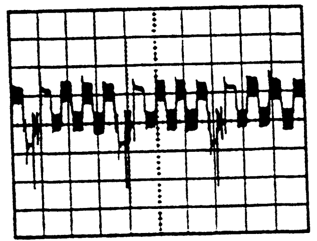

㉑ 1V 20μs/div

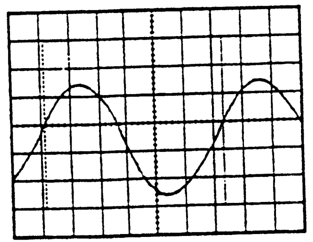


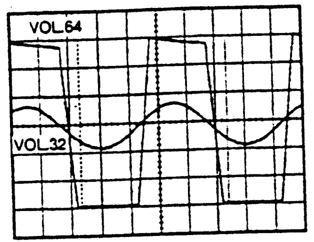
② ③ 2V 50μs/div


⑨ 200mV 200μs/div

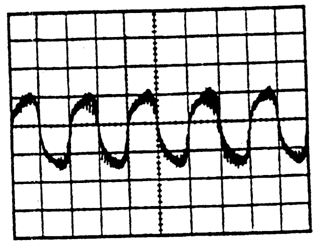

⑯ 20mV 100ns/div

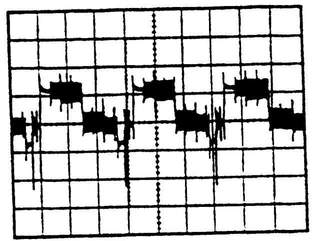

㉒ 1V 20μs/div


④ 1V 20ns/div



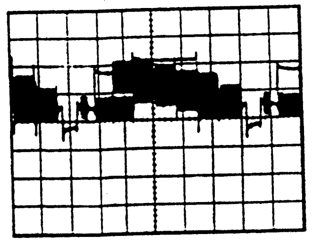
⑩ 2V 200μs/div

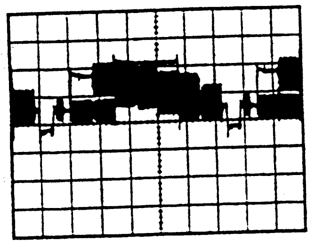

⑰ 50mV 1μs/div

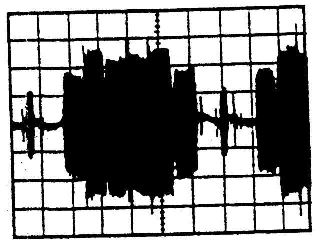

㉓ 1V 20μs/div

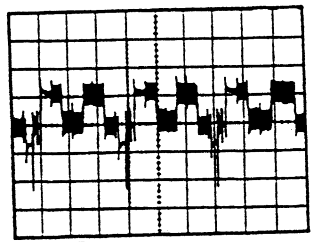
### A/V SW/AUDIO

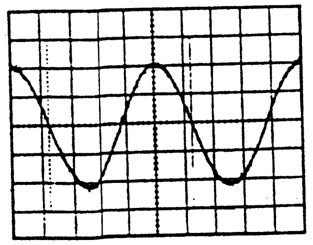
### CHROMA

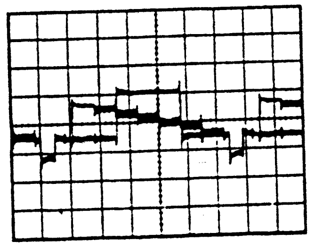

⑤ 1V 10μs/div

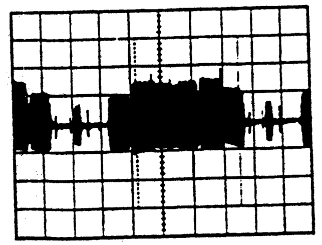

⑪ 1V 10μs/div

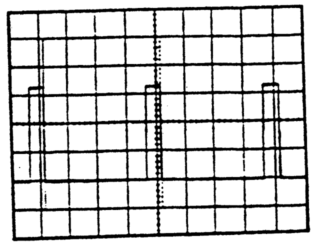

⑱ 50mV 10μs/div

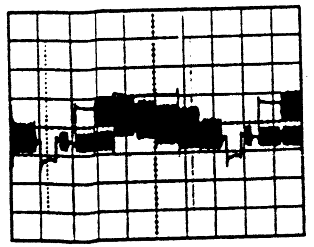

㉔ 1V 20μs/div

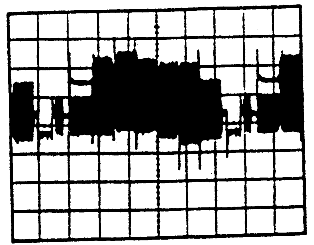

⑥ 200mV 200μs/div

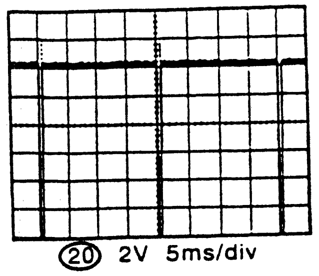

⑫ 0.5V 10μs/div

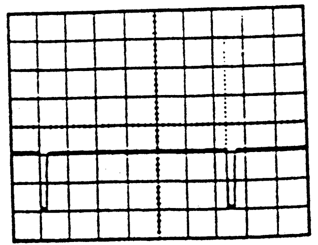

⑲ 200mV 10μs/div


㉕ 2V 5ms/div


⑦ 1V 10μs/div

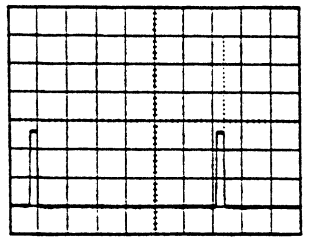

⑬ 0.5V 10μs/div

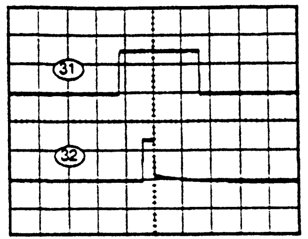

⑳ 2V 5ms/div


㉖ 2V 10μs/div

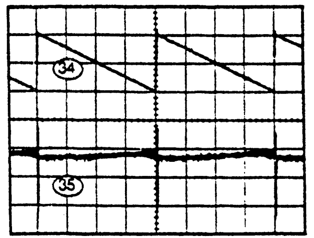
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

## WAVEFORMS

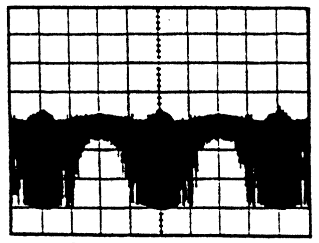

㉗ 2V 10μs/div

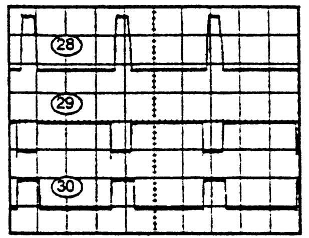


㉛ ㉜ 5V 1ms/div
Cinema 1

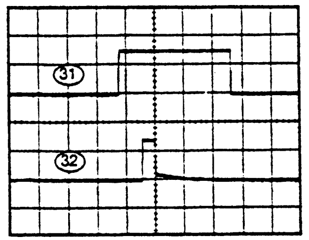


㉞ 0.5V 5ms/div
㉟ 1V 5ms/div Expand

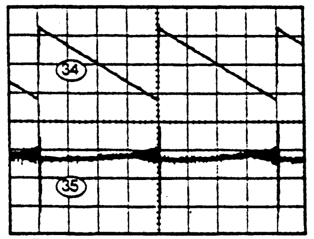

㊲ 0.5V 5ms/div
Expand



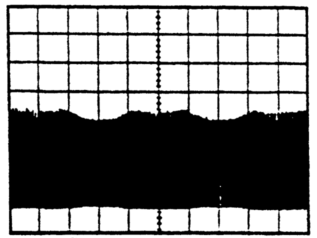
㉘ ㉙ ㉚ 5V 20μs/div
Normal

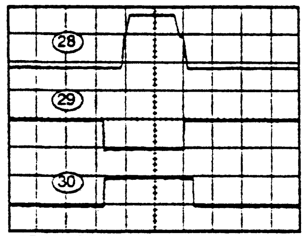


㉛ ㉜ 5V 1ms/div
Cinema 2

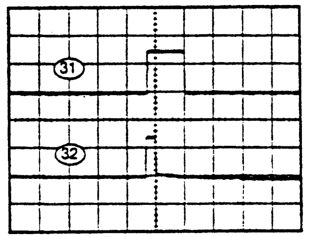


㉞ 0.5V 5ms/div
㉟ 1V 5ms/div Cinema 1

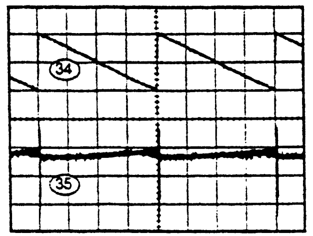

㊲ 0.5V 5ms/div
Cinema 1



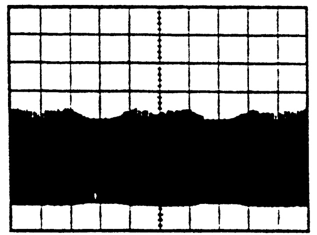
㉘ ㉙ ㉚ 5V 5μs/div
Normal

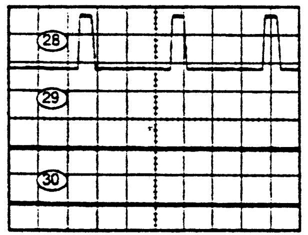


㉛ ㉜ 5V 1ms/div
Sub titl 1

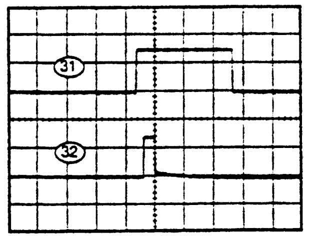


㉞ 0.5V 5ms/div
㉟ 1V 5ms/div Sub tile 1

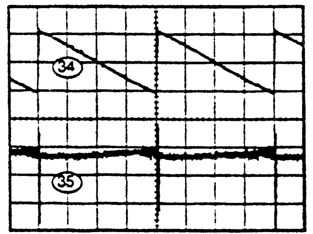

㊲ 0.5V 5ms/div
Cinema 2



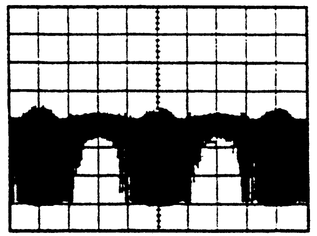
㉘ ㉙ ㉚ 5V 20μs/div
Ather than Normal



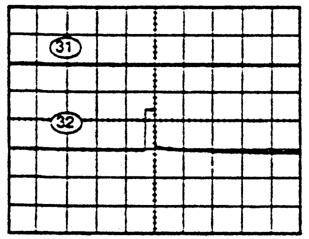
㉛ ㉜ 5V 1ms/div
Sub titl 2



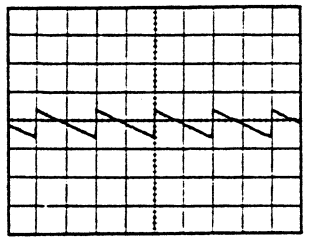
㉞ 0.5V 5ms/div
㉟ 1V 5ms/div Sub titl 2

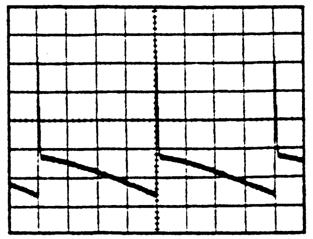

㊲ 0.5V 5ms/div
Sub titl 1

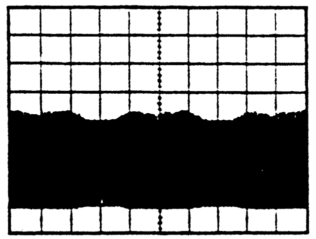
### DEFLECTION

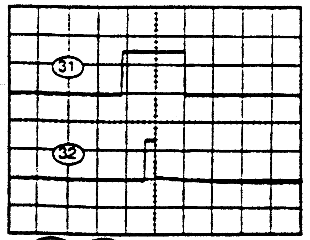


㉛ ㉜ 5V 1ms/div
Normal, Full screen

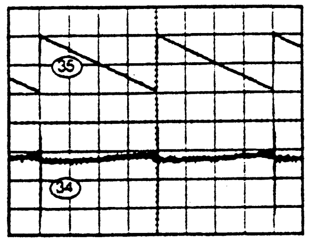

㉝ 2V 10ms/div


㊱ 10V 5ms/div

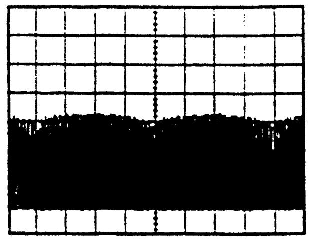

㊲ 0.5V 5ms/div
Sub titl 2

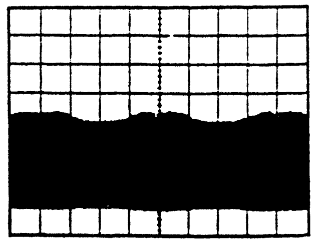


㉛ ㉜ 5V 1ms/div
Expand



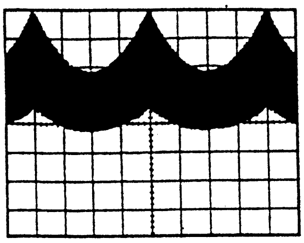
㉞ 0.5V 5ms/div
㉟ 1V 5ms/div
Normal, Full screen

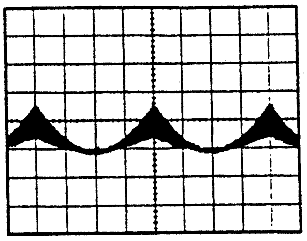

㊲ 0.5V 5ms/div
Normal

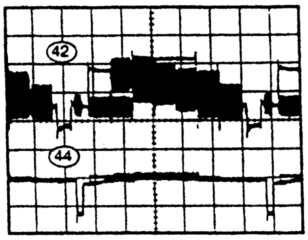

㊲ 0.5V 5ms/div
Full screen

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

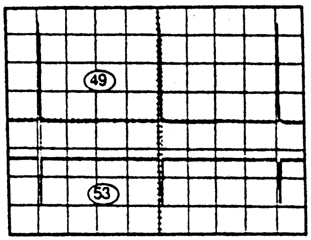
# WAVEFORMS


㊳ 1V 5ms/div
Normal

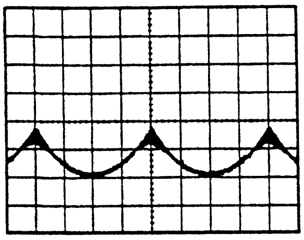

㊳ 1V 5ms/div
Full screen

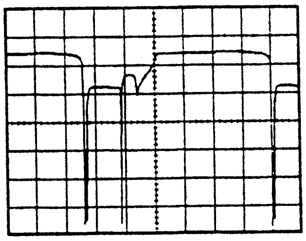


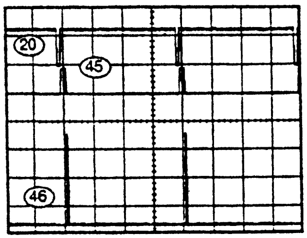
㊷ 1V 10µs/div
㊹ 5V 10µs/div



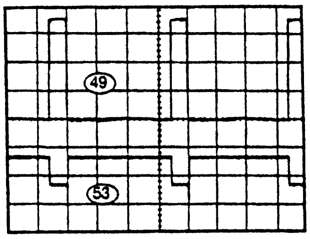
㊾ 5V 5ms/div
(53) 2V 5ms/div
Normal/Full screen


㊳ 1V 5ms/div
Expand

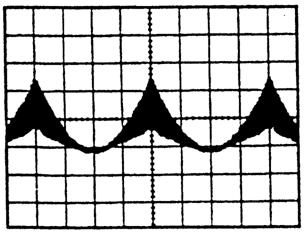

㊴ 2V 10µs/div

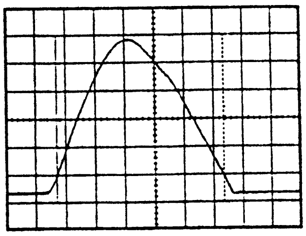


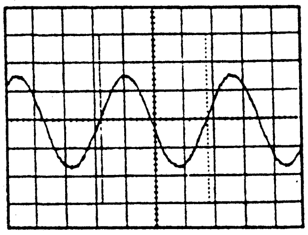
⑳ 5V 5ms/div
㊺ 10V 5ms/div
㊻ 2V 5ms/div

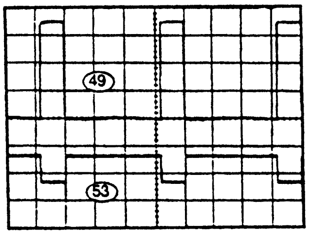


㊾ 5V 5ms/div
(53) 2V 5ms/div Cinema 1

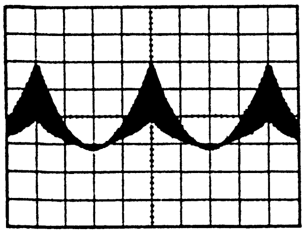

㊳ 1V 5ms/div
Cinema 1


㊵ 200V 2µs/div

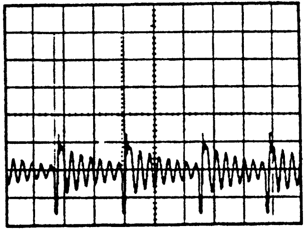

㊼ 500mV 20µs/div



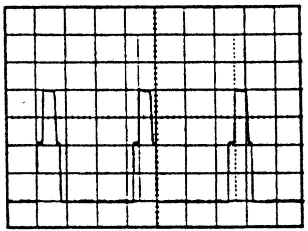
㊾ 5V 5ms/div
(53) 2V 5ms/div Cinema 1

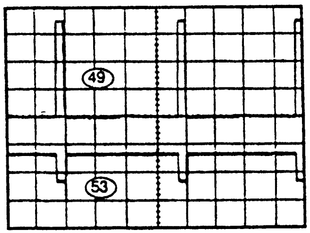

㊳ 1V 5ms/div
Cinema 2

## TUNER/POWER

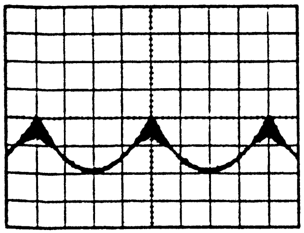

㊶ 200V 20µs/div
Stand by

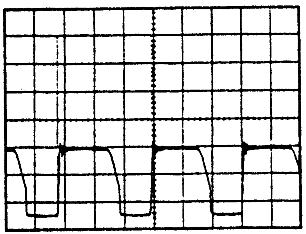
## AKB/CRT

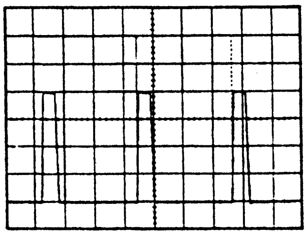

㊽ 2V 20µs/div
Normal

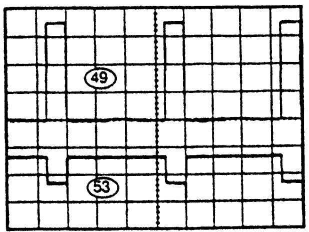


㊾ 5V 5ms/div
(53) 2V 5ms/div Cinema 2

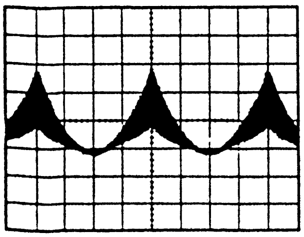

㊳ 1V 5ms/div
Sub titl 1


㊶ 200V 5µs/div
Power on

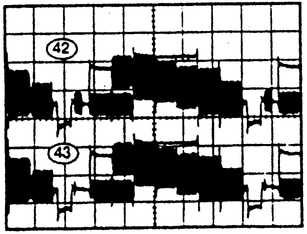

㊽ 2V 20µs/div
Ather then Normal



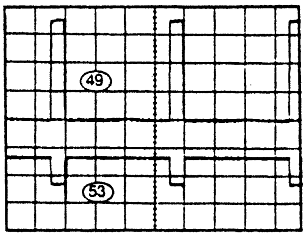
㊾ 5V 5ms/div
(53) 2V 5ms/div Sub titl 1


㊳ 1V 5ms/div
Sub titl 2

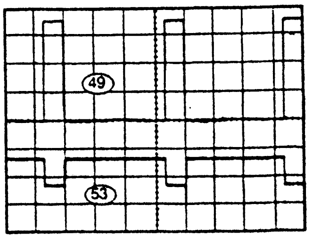
## WIDE



㊷㊸ 1V 50µs/div



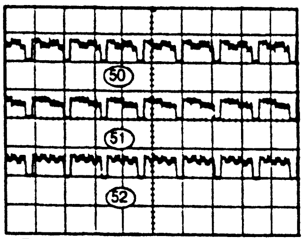
㊾ 5V 5ms/div
(53) 2V 5ms/div Expand



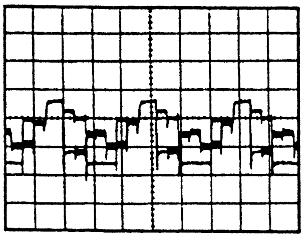
㊾ 5V 5ms/div
(53) 2V 5ms/div Sub titl 2

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

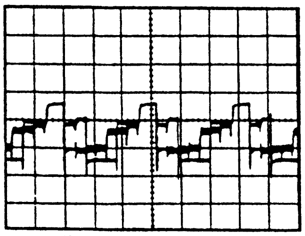
# WAVEFORMS



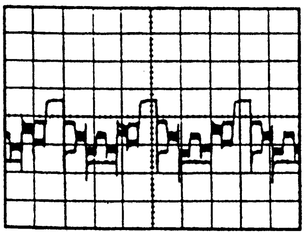
㊿ (51) (52) 5V 50μs/div



(54) 50V 20μs/div



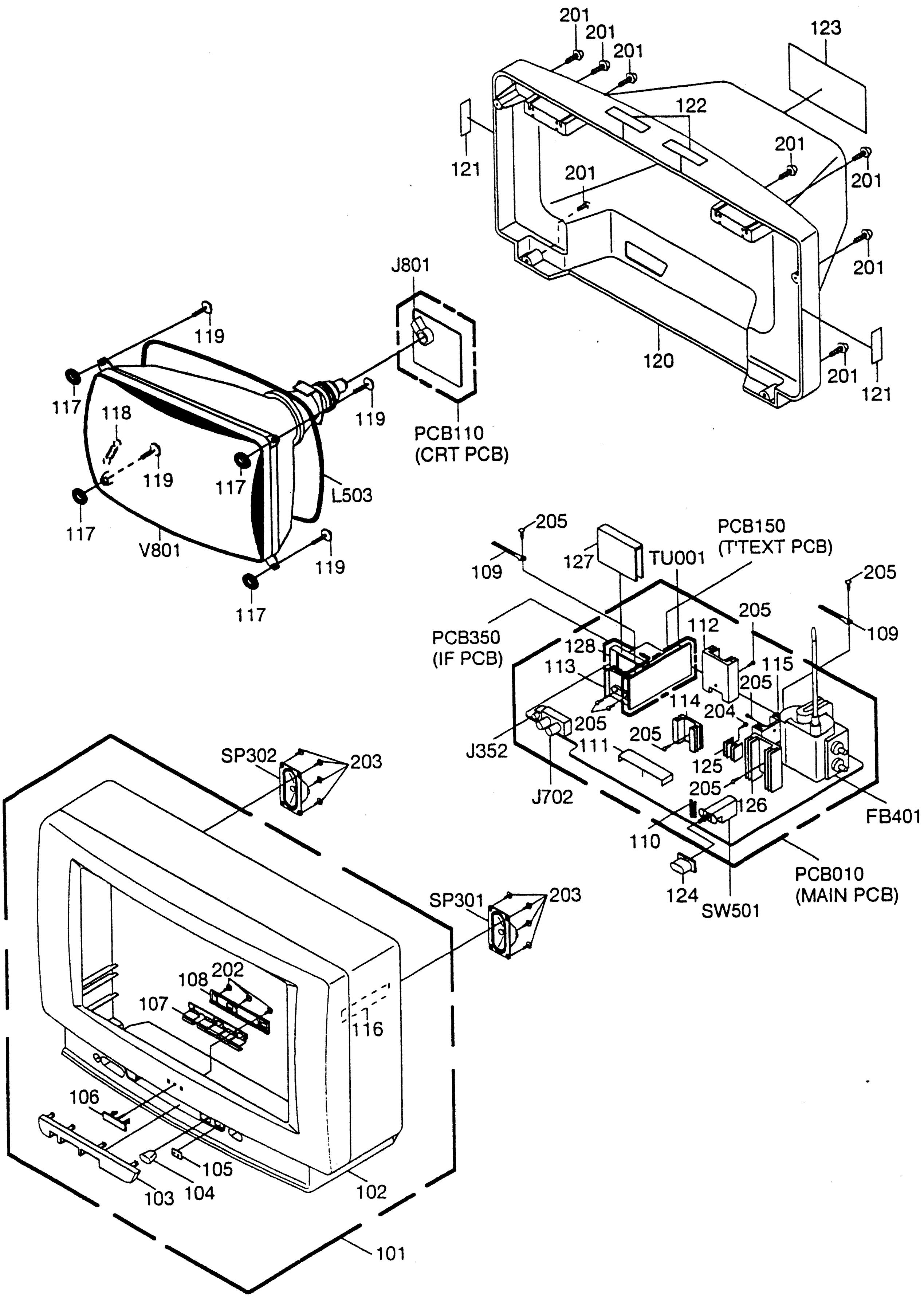
(55) 50V 20μs/div



(56) 50V 20μs/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

# MECHANICAL EXPLODED VIEW


201
201
201
123
122
121
201
201
201
201
201
120
201
121
J801
119
117
118
119
119
117
L503
PCB110
(CRT PCB)
117
V801
119
117
205
PCB150
(T'TEXT PCB)
127
TU001
109
205
PCB350
(IF PCB)
205
112
109
128
113
115
205
114
204
J352
205
205
111
125
205
126
J702
FB401
110
124
SW501
PCB010
(MAIN PCB)
SP302
203
SP301
203
108
202
107
116
106
105
103
104
102
101

4-3417

## MECHANICAL REPLACEMENT PARTS LIST

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| 101 | A3F102A720 | CABINET.FRONT ASS'Y |
| 102 | 701WPB0114 | CABINET.FRONT |
| 103 | 711WPD0412 | PLATE.FRONT |
| 104 | 713WPA0028 | GUIDE.REMOCON |
| 105 | 7230006066 | SHEET.LED |
| 106 | 7232020559 | BADGE.BRAND |
| 107 | 735WPA0256 | BUTTON.CONTROL |
| 108 | 735WPA0259 | HOLDER.BOTTON CONTROL |
| 109 | 8995034000 | CORD CLIP UL CO. |
| 110 | 779WPA0001 | HOLDER.LED |
| 111 | 752WSA0087 | SHIELD.IC |
| 112 | ---- | HEAT SINK |
| 113 | ---- | HEAT SINK |
| 114 | ---- | HEAT SINK |
| 115 | ---- | HEAT SINK |
| 116 | 7220001066 | SHEET.PTB |
| 117 | 800WR00022 | SHEET.CRT SUPPORT |
| 118 | 741WUA0005 | SPRING.EARTH |
| 119 | 8141J50D04 | SCREW.TAP TITE(P) GW22 5*40 |
| 120 | 702WPA0403 | CABINET.BACK |
| 121 | 800WQ00024 | FELT.SHEET |
| 122 | 800WQ00023 | FELT.SHEET |
| 123 | 7222022308 | SHEET.RATING |
| 124 | 736WPA0004 | BUTTON.POWER |
| 125 | ---- | HEAT SINK |
| 126 | ---- | HEAT SINK |
| 127 | 752WSA0032 | IF SHIELD CASE |
| 128 | 752WSA0033 | IF SHIELD BOTTOM |
| 201 | 8117540A64 | SCREW.TAPPING(BO) TRUSS 4*16 |
| 202 | 8117D30A04 | SCREW.TAPPING(BO) WH8 BRAZIER 3*10 |
| 203 | 8117D30804 | SCREW.TAPPING(BO) WH8 3*8 |
| 204 | 810A130804 | SCREW/WASHER(A) M3*8 |
| 205 | 8109630804 | SCREW.TAP TITE(B) BRAZIER 3*8 |
| --- | JA5Z0200 | POLY BAG |
| --- | J2960202 | GUARANTEE CARD |
| --- | J3F10201 | INSTRUCTION BOOK |
| --- | 791WHA0026 | LAMIFILM BAG |
| --- | 792WHA0146 | PACKAGE.TOP |
| --- | 792WHA0147 | PACKAGE.BOTTOM |
| --- | 793WCD1002 | GIFT BOX |

## ELECTRICAL REPLACEMENT PARTS LIST

### RESISTORS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| R004 | R00104103J | RC 10K OHM 1/4W |
| R318 | R5Y2CE5R6J | R.CEMENT 5.6 OHM 7W |
| R422 | R3X18A010J | R.METAL OXIDE 1.0 OHM 2W |
| R423 | R3X20B102J | R.METAL OXIDE 1K OHM 3W |
| ⚠ R424 | R3X20B102J | R.METAL OXIDE 1K OHM 3W |
| R428 | R3X18A101J | R.METAL OXIDE 100 OHM 2W |
| ⚠ R433 | R635811R8J | R.FUSE 1.8 OHM 1W |
| ⚠ R434 | R3X181R56J | R.METAL OXIDE 0.56 OHM 1W |
| ⚠ R438 | R5Y2CE2R7J | R.CEMENT 2.7 OHM 7W |
| ⚠ R442 | R63581010J | R.FUSE 1 OHM 1W |
| ⚠ R450 | R63582102J | R.FUSE 1K OHM 1/2W |
| ⚠ R451 | R635816R8J | R.FUSE 6.8 OHM 1W |
| R499 | R00202330J | RC 33 OHM 1/2W |
| ⚠ R501 | R5Y2CF5R6J | R.CEMENT 5.6 OHM 10W |
| ⚠ R502 | R3X28B333J | R.METAL OXIDE 33K OHM 3W |
| ⚠ R507 | R61584470J | R.FUSE 47 OHM 1/4W |
| ⚠ R513 | R3X28B150J | R.METAL OXIDE 15 OHM 3W |
| R516 | R3X181470J | R.METAL OXIDE 47 OHM 1W |
| ⚠ R520 | R3X18AR56J | R.METAL OXIDE 0.56 OHM 2W |
| ⚠ R526 | R002T2155J | RC 1.5M OHM 1/2W |
| ⚠ R527 | R3X28B473J | R.METAL OXIDE 47K OHM 3W |
| ⚠ R802 | R3X10A103J | R.METAL OXIDE 10K OHM 2W |
| ⚠ R805 | R3X10A103J | R.METAL OXIDE 10K OHM 2W |
| ⚠ R810 | R3X10A103J | R.METAL OXIDE 10K OHM 2W |
| R896 | R00106363J | RC 36K OHM 1/6W |
| ⚠ R916 | R615U4270J | R.FUSE 27 OHM 1/4W |
| R917 | 1230T10001 | JUMPER IN PCB 1230T10001 |

### CAPACITORS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C001 | E0E705220M | CE 22 UF 50V |
| C117 | CHG0B04K2J | CC 270 PF 50V B |
| C126 | CHG0B04K2J | CC 270 PF 50V B |
| C128 | CHG0B04Q2K | CC 470 PF 50V B |
| C402 | E0E701101M | CE 100 UF 10V |
| C416 | E02LF3222M | CE 2200 PF 25V |
| C420 | E53FF56R8K | CE 6.8 UF 50V NP |
| C426 | P4N2F9682J | CMMP 0.0068UF 1600V |
| C427 | P3N1F5153J | CPP 0.015 UF 630V |
| C430 | P3N1F5273J | CPP 0.027 UF 630V |
| C433 | E0EL04102M | CE 1000 UF 35V |
| C434 | P4N2F9682J | CMMP 0.0068UF 1600V |
| C440 | P3N1F4124J | CPP 0.12 UF 400V |
| C442 | P3N1F4154J | CPP 0.15 UF 400V |
| C443 | P3N1F4683J | CPP 0.068 UF 400V |
| C447 | C0308N713K | CC 0.001 UF 2KV BN |
| ⚠ C502 | P2222B104K | CMP 0.1 UF 250V AC |
| ⚠ C504 | CB3930M13M | CC 0.001 UF 250V |
| ⚠ C505 | P2222B224K | CMP 0.22 UF 250V AC |
| ⚠ C506 | C0JB807H3K | CC 0.0022UF 2KV B |
| ⚠ C507 | C0JB807H3K | CC 0.0022UF 2KV B |
| C514 | C034BN7L2K | CC 330 PF 2KV BN |
| ⚠ C515 | E02LTB010M | CE 1 UF 160V |
| C518 | E52C0H101M | CE 100 UF 400V |
| ⚠ C520 | CB3930M13M | CC 0.001 UF 250V |
| C525 | CB3930M13M | CC 0.001 UF 250V |
| C527 | C034BN7W2K | CC 820 PF 2KV BN |
| C529 | E0EIFC101M | CE 100 UF 200V |
| C536 | C034BN7H2K | CC 220 PF 2KV BN |
| C610 | E02L05470M | CE 47 UF 50V |
| C649 | C010RH4L2J | CC 330 PF 50V RH |
| C656 | CHG0B04K2J | CC 270 PF 50V B |
| C699 | C010RH4L2J | CC 330 PF 50V RH |
| C813 | C0JB807H3K | CC 0.0022UF 2KV B |
| C898 | P6M300104J | CMPL 0.1 UF 50V TF |
| C920 | C0J0SL412J | CC 100 PF 50V SL |

### SEMICONDUCTORS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| D001 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D101 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D102 | D1VT024720 | DIODE.SILICON 1S2472T-77 |
| D104 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D106 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D107 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D109 | 0021120030 | LED LN81RCPH |
| D111 | D1VT024720 | DIODE.SILICON 1S2472T-77 |
| D113 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D114 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D301 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D302 | D97U07R51B | DIODE.ZENER MTZJ7.5B T-77 |
| D401 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D402 | D9JT07R51B | DIODE.ZENER UZ-7.5BCB-TA |

### SEMICONDUCTORS (CONT.)

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| D404 | D9JT09R11B | DIODE.ZENER UZ-9.1BCB-TA |
| D405 | D28T011E10 | DIODE.SILICON 11E1TA1B2 |
| D406 | D2BFRS4FS0 | DIODE.SILICON RS-4FS |
| D407 | D2BFRU4AM0 | DIODE.SILICON RU-4AM |
| D408 | D9JT07R51B | DIODE.ZENER UZ-7.5BCB-TA |
| D409 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D410 | D97U03601B | DIODE.ZENER MTZJ36B T-77 |
| D411 | D2BTAU02A0 | DIODE.SILICON AU02A V0 |
| D412 | D2BTAU02A0 | DIODE.SILICON AU02A V0 |
| D417 | D2BTAU02A0 | DIODE.SILICON AU02A V0 |
| D501 | D97U02701B | DIODE.ZENER MTZJ27B T-77 |
| ⚠ D502 | D2BTRM11C0 | DIODE.RECTIFIER RM11C |
| ⚠ D503 | D2BTRM11C0 | DIODE.RECTIFIER RM11C |
| ⚠ D504 | D2BTRM11C0 | DIODE.RECTIFIER RM11C |
| ⚠ D505 | D2BTRM11C0 | DIODE.RECTIFIER RM11C |
| D506 | D28T011E20 | DIODE.SILICON 11E2TA1B2 |
| D507 | D25T1R5NU0 | DIODE.SILICON 1R5NU41 |
| D509 | D28T011E20 | DIODE.SILICON 11E2TA1B2 |
| ⚠ D511 | D2BTAU02A0 | DIODE.SILICON AU02A V0 |
| D512 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D513 | D28115DF60 | DIODE.SILICON 15DF6-FC |
| D514 | D2BTAU02A0 | DIODE.SILICON AU02A V0 |
| D515 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D519 | D97U05R61B | DIODE.ZENER MTZJ5.6B T-77 |
| D521 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D522 | D97U01801B | DIODE.ZENER MTZJ18B T-77 |
| D523 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D524 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D526 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| ⚠ D527 | D97U05R11B | DIODE.ZENER MTZJ5.1B T-77 |
| D601 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D602 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D605 | D9JT09R11B | DIODE.ZENER UZ-9.1BCB-TA |
| D608 | D1VT024720 | DIODE.SILICON 1S2472T-77 |
| D609 | D97U05R61B | DIODE.ZENER MTZJ5.6B T-77 |
| D610 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D617 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D618 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D702 | D97U06R81B | DIODE.ZENER MTZJ6.8B T-77 |
| D703 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D706 | D9JT06R81B | DIODE.ZENER UZ-6.8BCB-TA |
| D707 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D709 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D710 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D711 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D712 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D713 | D9JT05R11B | DIODE.ZENER UZ-5.1BCB-TA |
| D714 | D9JT01201B | DIODE.ZENER UZ-12BCB-TA |
| D751 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D752 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D753 | DD3RLFB01L | DIODE.SILICON LFB-01L |
| D801 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D802 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D803 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D804 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D805 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D806 | D9JT01201B | DIODE.ZENER UZ-12BCB-TA |
| D851 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| D901 | D97U05R11B | DIODE.ZENER MTZJ5.1B T-77 |
| D905 | D97U01201B | DIODE.ZENER MTZJ12B T-77 |
| D910 | D1VT001320 | DIODE.SILICON 1SS132T-77 |
| ⚠ IC001 | 10MI90574J | IC UPC574J-T |
| IC101 | 153F02FM60 | IC ST24C02FM6TR |
| IC102 | 19UJ0T600H | IC PST600H |
| IC103 | 155D06035A | IC OEC6035A |
| IC301 | 101S058360 | IC AN5836 |
| ⚠ IC302 | 103SP44450 | IC LA4445 |
| IC401 | 155DA8859C | IC TA8859CP |
| ⚠ IC402 | 10Q0978090 | IC NJM7809FA |
| ⚠ IC403 | 105SD84030 | IC TA8403K |
| IC404 | 0002500270 | PHOTO COUPLER TLP521-1 |
| ⚠ IC501 | 10ED046050 | IC TDA4605-3 |
| ⚠ IC502 | 10QK978060 | IC NJM7806FA |
| ⚠ IC503 | 10QK978120 | IC NJM7812FA |
| IC601 | 105DE8867B | IC TA8867BN |
| IC602 | 155DHC123P | IC TC74HC123AP |
| IC701 | 106D024720 | IC M52472P |
| IC751 | 157D4538B0 | IC BU4538B |
| IC752 | 1030063930 | IC LA63930 |
| IC851 | 15CD002000 | IC CF70200NW |
| IC852 | 15CD023060 | IC CF72306 |
| IC853 | 101S0862K0 | IC AN5862K |
| IC901 | 105DE8751A | IC TA8751AN |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| SEMICONDUCTORS (CONT.) | | |
| IC6001 | 106DA52313 | IC M52313SP |
| IC6003 | 102J98L050 | IC UPC78L05J-T |
| Q001 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q101 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q102 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q103 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q104 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q105 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q106 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q107 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q108 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q109 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q110 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q111 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q112 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q113 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q114 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q118 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q119 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q120 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q123 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q301 | TNYTB05001 | COMPOUND TRANSISTOR DTC114EKT147 |
| Q302 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q303 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q304 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q305 | TNYTB05001 | COMPOUND TRANSISTOR DTC114EKT147 |
| Q307 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q309 | T8YA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q310 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q401 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q402 | TC3Q026210 | TRANSISTOR.SILICON 2SC2621-RAC |
| Q403 | TC7T017400 | TRANSISTOR.SILICON 2SC1740(R.S)-T |
| Q404 | TC30041590 | TRANSISTOR.SILICON 2SC4159(D.E) |
| Q405 | TDUF024990 | TRANSISTOR.SILICON 2SD2499 |
| Q406 | TD3T008630 | TRANSISTOR.SILICON 2SD863(D.E)-AE |
| Q407 | TB3T008920 | TRANSISTOR.SILICON 2SB892(S.T)-AE |
| Q408 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q409 | TNYTJ03001 | COMPOUND TRANSISTOR DTC114TSTP |
| Q411 | T230002010 | TRANSISTOR.FIELD EFFECT 2SK2010 |
| Q413 | TPYTJ05002 | COMPOUND TRANSISTOR DTA114TKT147 |
| ⚠ Q501 | T41FK23970 | TR..FIELD EFFECT 2SK2397-01MR |
| Q502 | TC3T034680 | TRANSISTOR.SILICON 2SC3468(D.E)-AE |
| ⚠ Q503 | TA3T1371A0 | TRANSISTOR.SILICON 2SA1371(D.E)-AE |
| ⚠ Q504 | TC30041600 | TRANSISTOR.SILICON 2SC4160-ORI |
| Q505 | TA3T016240 | TRANSISTOR.SILICON 2SA1624-AA |
| Q507 | TAST007330 | TRANSISTOR.SILICON 2SA733(C)-T |
| Q509 | TPYTB05001 | COMPOUND TRANSISTOR DTA114EKT147 |
| Q510 | TNYTB05001 | COMPOUND TRANSISTOR DTC114EKT147 |
| Q527 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q601 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q602 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q603 | TPYTB05001 | COMPOUND TRANSISTOR DTA114EKT147 |
| Q613 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q614 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q615 | TPYTB05001 | COMPOUND TRANSISTOR DTA114EKT147 |
| Q616 | TNYTB05001 | COMPOUND TRANSISTOR DTC114EKT147 |
| Q617 | TNYTB05001 | COMPOUND TRANSISTOR DTC114EKT147 |
| Q618 | TNYTD05002 | COMPOUND TRANSISTOR DTC144TKT147 |
| Q619 | TN7TJ05001 | COMPOUND TRANSISTOR DTC114TKT147 |
| Q620 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q702 | TAS0007330 | TRANSISTOR.SILICON 2SA733(C) |
| Q703 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q751 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q752 | TPYTB05001 | COMPOUND TRANSISTOR DTA114EKT147 |
| Q753 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q756 | T23T003040 | TR..FIELD EFFECT 2SK304(D.E)-SPA |
| Q758 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q759 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q760 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q801 | TBUTBF4210 | TRANSISTOR.SILICON BF421(TPE2) |
| Q802 | TBUTBF4210 | TRANSISTOR.SILICON BF421(TPE2) |
| Q803 | TBUTBF4210 | TRANSISTOR.SILICON BF421(TPE2) |
| Q804 | TCS0026880 | TRANSISTOR.SILICON 2SC2688(L).(M) |
| Q805 | TCS0026880 | TRANSISTOR.SILICON 2SC2688(L).(M) |
| Q806 | TCS0026880 | TRANSISTOR.SILICON 2SC2688(L).(M) |
| Q853 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q857 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q858 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q859 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q860 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q861 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q862 | T8QA2412K0 | TRANSISTOR.SILICON 2SC2412KT147 |
| Q903 | TAST00952L | TRANSISTOR.SILICON 2SA952(C)-T L |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| SEMICONDUCTORS (CONT.) | | |
| Q6002 | T6YA1037K0 | TRANSISTOR.SILICON 2SA1037KT147 |
| Q6003 | TC3T030000 | TRANSISTOR.SILICON 2SC3000-AA |
| COILS & TRANSFORMERS | | |
| L101 | 021LA6220J | COIL 22 UH |
| L302 | 0216731R2K | COIL 1.2 UH |
| L303 | 0216731R2K | COIL 1.2 UH |
| L305 | 021LA6220J | COIL 22 UH |
| L306 | 02A6A8A0A1 | CORE.FERRITE HF57T18.5*10*10 |
| L307 | 021673102K | COIL 1000 UH |
| L401 | 021LA6101K | COIL 100 UH |
| L402 | 02DG000001 | COIL L0L007 |
| L404 | 022G000012 | COIL.LINEARITY 2100012 |
| ⚠ L501 | 0294000062 | COIL.LINE FILTER 9-000062 |
| ⚠ L502 | 029K000001 | COIL.LINE FILTER RB-20871 |
| ⚠ L503 | 028R200022 | COIL.DEGAUSS 8R200022 |
| L603 | 021LA6560J | COIL 56 UH |
| L604 | 021LA6330J | COIL 33 UH |
| L605 | 021QA68R2J | COIL 8.2 UH |
| L606 | 021LA6120J | COIL 12 UH |
| L607 | 021JA2100K | COIL 10 UH |
| L608 | 02A6B2E0A1 | CORE.FERRITE HF70T22*10*14 |
| L701 | 021LA6101K | COIL 100 UH |
| L702 | 021LA6220K | COIL 22 UH |
| L703 | 021JA2220K | COIL 22 UH |
| L704 | 021LA6220K | COIL 22 UH |
| L705 | 021LA6220K | COIL 22 UH |
| L706 | 021JA2220K | COIL 22 UH |
| L707 | 021JA2220K | COIL 22 UH |
| L751 | 021QA6471J | COIL 470 UH |
| L752 | 021LA6100K | COIL 10 UH |
| L801 | 021JA2151K | COIL 150 UH |
| L851 | 021LA6100K | COIL 10 UH |
| L852 | 021LA6100K | COIL 10 UH |
| L6002 | 021673101K | COIL 100 UH |
| L6004 | 021LA6150K | COIL 15 UH |
| L6005 | 021LA61R5K | COIL 1.5 UH |
| L6007 | 021LA66R8K | COIL 6.8 UH |
| L6009 | 021LA6120K | COIL 12 UH |
| L6010 | 021LA66R8K | COIL 6.8 UH |
| L6011 | 033600038R | COIL.VIDEO IFT 3600038 |
| L6012 | 033600037R | COIL.VIDEO IFT 3600037 |
| L6013 | 03360M002I | COIL.VIDEO IFT 360M002 |
| L6016 | 021LA6820K | COIL 82 UH |
| T401 | 03305Y002S | TRANS..HORIZONTAL DRIVE 305Y002 |
| ⚠ T501 | 048140033W | TRRANSFORMAR.SWITCHING 8140033W |
| JACKS | | |
| J352 | 0602131007 | JACK.RCA 3.5 HSJ0912-01-020 |
| J701 | 0632100006 | SOCKET.21 PIN HXC1510-01-300 |
| J702 | 0607401001 | JACK.RCA LPR1020-0300M |
| ⚠ J801 | 0666120011 | SOCKET.CRT CVT3325-0603 |
| SWITCHES | | |
| SW101 | 0504101T32 | SWITCH.TACT EVQ PB1 05K |
| SW102 | 0504101T32 | SWITCH.TACT EVQ PB1 05K |
| SW103 | 0504101T32 | SWITCH.TACT EVQ PB1 05K |
| SW104 | 0504101T32 | SWITCH.TACT EVQ PB1 05K |
| SW105 | 0504101T32 | SWITCH.TACT EVQ PB1 05K |
| ⚠ SW501 | 0530105005 | SWITCH.PUSH ESB-90217S |
| VARIABLE RESISTORS | | |
| VR501 | V1163Q2BT6 | VOLUME SEMI FIXED EVNDXAA03BQ2 |
| VR601 | V116313BT6 | VOLUME SEMI FIXED EVNDXAA03B13 |
| VR602 | V1163H4BT6 | VOLUME SEMI FIXED EVNDXAA03BE4 |
| P.C. BOARD ASSEMBLIES | | |
| PCB010 | A3F102A01A | PCB ASS'Y TM6354A |
| PCB110 | A3F102A11A | PCB ASS'Y TC0177A |
| PCB150 | A3F102A15A | PCB ASS'Y TE0827C |
| PCB350 | A3F102A35A | PCB ASS'Y VE4666B |
| MISCELLANEOUS | | |
| B501 | 0241T03851 | CORE BEADS EXCELSA35T |
| B502 | 0241T03851 | CORE BEADS EXCELSA35T |
| B503 | 0241T03851 | CORE BEADS EXCELSA35T |
| B601 | 024AC14015 | CORE BEADS (CHIP) BLM31A601SPT |
| B602 | 024AC14015 | CORE BEADS (CHIP) BLM31A601SPT |
| B603 | 024AC14015 | CORE BEADS (CHIP) BLM31A601SPT |
| B604 | 024AC14015 | CORE BEADS (CHIP) BLM31A601SPT |
| B605 | 024AC14015 | CORE BEADS (CHIP) BLM31A601SPT |
| B701 | 0241T03851 | CORE BEADS EXCELSA35T |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| MISCELLANEOUS (CONT.) | | |
| BT001 | 1412004008 | BATTERY.MANGAN R03(AB)E 20 T |
| BT002 | 1412004008 | BATTERY.MANGAN R03(AB)E 20 T |
| CD304 | 06C714355A | CORD.CONNECTOR 06C714355A |
| ⚠ CD501 | 120T650804 | CORD.AC 120T650804 |
| CD801 | 06CP83035A | CORD.CONNECTOR CP83035A |
| CD802 | 06812D059A | CORD.CONNECTOR 812D059A |
| CD803 | 068114365A | CORD.CONNECTOR 068114365A |
| CD854 | 068123054A | CORD.CONNECTOR 8123054A |
| CP304 | 069W14T290 | CONNECTOR PCB SIDE TID-X04P-Z1BK |
| CP401 | 069W350018 | CONNECTOR PCB SIDE TS-80P-05-V1 |
| CP501 | 0694430100 | CORD.UX CONNECTOR 2-173270-3 |
| CP502 | 069W420029 | CONNECTOR PCB SIDE TV-50P-02-A1 |
| CP801 | 069W330018 | CONNECTOR PCB SIDE TS-80P-03-V1 |
| CP802 | 06942D0129 | CONNECTOR PCB SIDE 1-173981-3 |
| CP803 | 069W14T299 | CONNECTOR PCB SIDE TID-X04P-Z1 |
| CP807 | 069W010020 | CONNECTOR PCB SIDE 005P-1100 |
| CP851 | 069Q180179 | CONNECTOR PCB SIDE CPB1808-0101 |
| CP852 | 069H170209 | CONNECTOR PCB SIDE ILG7P-S3L-PCB-S |
| CP853 | 069H150209 | CONNECTOR PCB SIDE ILG5P-S3L-PCB-S |
| CP854 | 069W13T299 | CONNECTOR PCB SIDE TID-X03P-Z1 |
| CF6001 | 1012T5R503 | FILTER.CERAMIC TRAP TPS5.5MB-TF21 |
| CF6003 | 1012T05R52 | FILTER.CERAMIC SFE5.5MC2-TF21 |
| CF6004 | 1027238R91 | FILTER.SAW F-1044QS |
| CF6005 | 1012T5R509 | FILTER.C.DISCRI CDSH5.5ME44K-TF |
| CP6001 | 069J1C0260 | CONNECTOR PCB SIDE 6035B-12Z002-T |
| DL601 | 103402R501 | DELAY LINE SDL-4104 |
| DL602 | 104W14R43F | DELAY LINE GLASS ADL-CP145R |
| DY801 | 0275052003 | DY TY-20NA4K |
| F501 | 0808T04002 | FUSE 4A 250V |
| FB401 | 043220043A | TRANSFORMER FLYBACK 3220043 |
| FH501 | 06710T0006 | HOLDER.FUSE EYF-52BC |
| FH502 | 06710T0006 | HOLDER.FUSE EYF-52BC |
| ⚠ ICP502 | 083PC1R602 | MICRO FUSE 1.6A |
| ⚠ ICP503 | 083PC02002 | MICRO FUSE 2A |
| JP801 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP802 | 1230T12501 | JUMPER IN PCB 1230T12501 |
| JP803 | 1230T10001 | JUMPER IN PCB 1230T10001 |
| JP804 | 1230T07501 | JUMPER IN PCB 1230T07501 |
| JP805 | 1230T10001 | JUMPER IN PCB 1230T10001 |
| JP806 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6001 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6002 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6003 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6004 | 1230T10001 | JUMPER IN PCB 1230T10001 |
| JP6009 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6101 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| JP6102 | 1230T05001 | JUMPER IN PCB 1230T05001 |
| K001 | 129C000014 | WEDGE DB25SR |
| K002 | 129C000014 | WEDGE DB25SR |
| K003 | 129C000014 | WEDGE DB25SR |
| K004 | 129C000014 | WEDGE DB25SR |
| MG801 | 0265052003 | MAGNET TP-8600EX3 |
| OS101 | 0779014002 | REMOTE RECEIVER GP1U281Q |
| PH001 | 069W01001A | CONNECTOR PCB SIDE 003P-2100 |
| PH002 | 069W01001A | CONNECTOR PCB SIDE 003P-2100 |
| SP301 | 070W532006 | SPEAKER MS-2D30SB326 |
| SP302 | 070W532006 | SPEAKER MS-2D30SB326 |
| TH501 | D8R0F140M0 | DEGAUSS ELEMENT PTH451C262BF140M |
| TM101 | 07660BD01C | TRANSMITTER SBER20093C |
| ⚠ TU001 | 0145601030 | TUNER TELE4-052A |
| ⚠ V801 | 09W5200002 | CRT W/O DY W46LFH193X |
| X101 | 100WA8R003 | CRYSTAL HC-49/U 8.00MHZ |
| X601 | 1002R01502 | CERAMIC OSCILLATOR CSB503F30 |
| X602 | 100W4R43B2 | CRYSTAL HC49U 4.433619MHZ |
| X851 | 100WA01301 | CRYSTAL 100WA1301 |

RESISTOR
RC.........CARBON RESISTOR

CAPACITORS
CC.........CERAMIC CAPACITOR
CE.........ALUMI ELECTROLYTIC CAPACITOR
CP.........POLYESTER CAPACITOR
CPP........POLYPROPYLENE CAPACITOR
CPL........PLASTIC CAPACITOR
CMP........METAL POLYESTER CAPACITOR
CMPL.......METAL PLASTIC CAPACITOR
CMPP.......METAL POLYPROPYLENE CAPACITOR
CST........STYROL CAPACITOR